EASTERN ECONOMIST

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A blueprint for exports

NOW THAT exports from this country have started increasing both in value and volume, a dialogue between the government and the business community becomes all the more essential in order to consolidate the gains already made and to win over a rising share of the world trade. The study made by the Federation of Indian Chambers of Commerce & Industry (FICCI) regarding export and production perspectives till 1980-81 is timely in the sense that it provides an opportunity to discuss the ways and means which need to be adopted for raising both production and investment in this country to support the export effort (see Records and Statistics, page 121).

A detailed analysis of our exports indicates that the number of goods covered runs into thousands while the markets fed number more than 100. However, ten major products exported to ten leading markets account for 60 per cent of our exports. And the share can certainly be enhanced further provided the export surpluses in adequate quantities can be generated. But it will be unwise to do so at the cost of domestic consumption which might cause unnecessary tensions in the economy. True our agricultural exports constitute only six per cent of farm output while industrial exports consist of eight per cent of industrial production; these percentages in themselves seem small but any sharp increases in them might generate hardships in the domestic market. Hence the FICCI has rightly emphasised the importance of increasing domestic production before venturing to cultivate new markets or enhancing exports to traditional markets.

Says the FICCI study: "As a general guideline, export should not exceed 25 per cent of domestic production. Of course, this guideline cannot be rigidly applied in all cases. Industries like tea, coffee, jute, etc already export about a half of the total domestic output. By and large, if exports are limited to 25 per cent of industrial production, the economy will be in a better position to absorb external fluctuations". But even raising the share of exports from eight to 25 per cent of domestic industrial production will need Herculean efforts at various levels. And there does not seem to be any sanctity or econometric validity about the percentage prescribed; the movement upwards of exports will have to be slow and steady and not in jerks if it is to have some abiding value.

For example, it is estimated that in order to be able to increase the export of engineering goods by Rs 752 crores in 1980-81 over 1974-75, the improvement in domestic production will have to be of the order of Rs 4,424 crores. Similarly, for increase in the exports of jute manufactures by 35,000 tonnes, domestic output will need to be raised by 161,000 tonnes. Similar indicative targets have been set down for tea, coffee, tobacco (unmanufactured), sugar, marine products, non-essential oils, coal and coke, iron ore and cement, art silk fabrics, cotton textiles (mill-made), cotton textiles (handloom and powerloom), chemicals and allied products, rubber manufactures, leather and leather products, cashew kernals, spices, rice, and coir and coir goods (see Records and Statistics, page 121).

There is no doubt that some of the export targets set for 1980-81 can be achieved without much effort. This applies particularly to cement and sugar. In the case of cement, the State Trading Corporation exported 400,000 tonnes in 1975-76. The central ministry of Industry and Civil Supplies is of the opinion that cement exports can be raised to a million tonnes in 1976-77 and for this purpose, the necessary measures are being taken. For example, the STC has been persuaded to forego its monopoly in the export of cement and to let the private exporters try their hand at it. The manufacturers of cement and the

Industry ministry are agreed that the Gulf countries provide a lucrative outlet for cement and that intensive efforts need to be made — more intensive than it has been possible for the STC to put in.

In order to raise the exports of cement, a high-level committee has been formed; it includes representatives of the leading cement manufacturers, the STC and the joint secretary of the ministry of Industry as chairman. With rising availability of cement, this committee may be able to increase its exports up to two million tonnes much before 1980-81. In the case of sugar also, the target of two million tonnes may be reached well ahead of 1980-81 if vigilance and pragmatism of the same order is exhibited as has been the case with cement. As stated by Mr Vinod Parikh in an exclusive interview to *Eastern Economist* (EE dated July 2, 1976; page 24) the export of sugar in 1975-76 was as high as 1.2 million tonnes. With a little more effort, domestic production can be raised — notwithstanding the setback in production in the current year — by two million tonnes so as to reach the target set down for 1980-81.

Intractable problems

The sharp increase in output in cotton textiles envisaged would however pose certain intractable problems such as the paucity of raw cotton and the out-moded character of machinery. In our effort to increase food production, some of the cash crops such as cotton have not received the priority in planning as they deserved. Consequently, substantial gap between the demand and supply of cotton remains necessitating large imports from abroad. At the time of writing, the government is thinking of importing not less than 150,000 bales of cotton before the arrival of the new crop. Thus, only two alternatives are open to us. Either to raise the domestic production of cotton or to be prepared to import increasing quantities of this fibre. The proposed step-up in domestic production of cotton textiles (mill-made, handloom and powerloom) by 1358 million metres will need sizeable increase in imports of cotton and the foreign exchange account will have to provide for it. Moreover, to be competitive in the world markets, the modernisation of the cotton mills will require substantial investment for which the financial institutions will be called upon to make adequate arrangements.

The study under reference has estimated that additional investment of the order of Rs 1817 crores will be needed for hitting the suggested targets of exports in 1980-81. The highest investment at Rs 671 crores is computed for the engineering industries followed by Rs 460 crores for iron ore, Rs 190 crores for chemicals, Rs 170 crores for cement, Rs 26 crores for silk and art silk and Rs 300 crores for others. This investment is besides what is required to establish capacity for domestic production. The investment of the order of Rs 600 crores a year merely for the export industries for the next three years will mean saving up to a little less than one per cent of the Gross National Product (GNP) to finance the export industries. The link-up with the GNP does give a simplistic interpretation to the effort required which however cannot but exert heavy pressure on available resources on which claims of other sectors will be equally pressing.

Whatever the size of the challenge, the government and the industry in this country can face it provided the mutual trust is further strengthened. The strangulating restrictions in relation to licensing, price control, Monopolies and Restrictive Trade Prictices, Foreign Exchange Regulation Act and import control will need to be done away with if a breakthrough in exports is to be achieved. In fact, the whole strategy for exports will have to be re-fashioned in consultation with the exporting industries.

Foreign exchange piles up

THE FOREIGN balances held by the Reserve Bank of India in the Issue and Banking Departments have been surging since March last year at a rate which has not been witnessed in the past one and a half decades and more. Until 1974-75 the Reserve Bank experienced serious difficulty in financing imports and even the devaluation of the rupee in June 1966 did not help bring about an equilibrium in foreign trade not to speak of the balance of payments position. The trade deficits too could not be bridged with the aid made available by members of the Aid-India Consortium and it became necessary to borrow heavily from the International Monetary Fund. In 1974-75, there was severe strain on the balance of payments position in spite of liberal assistance from members of the Consortium and there had to be heavy borrowing from the International Monetary Fund (IMF) apart from utilising the Oil Facility. The trade deficit of Rs 1189 crores had to be wiped out by using aid fully and also borrowing to the extent of Rs 484.70 crores. Even so, foreign balances with the Reserve Bank at the end of March 1975 were only Rs 632.89 crores as compared to Rs 529.87 crores at the end of March 1974. But for the borrowings from the International Monetary Fund foreign exchange reserves would have declined to perilously low levels.

The developments in the past fifteen months, however, have been taking place on entirely different lines. The trade deficit for 1975-76 also has been sizable at Rs 1154 crores. But it has not been necessary to borrow again

heavily from the International Monetary Fund and the Oil Facility of Rs 207.15 crores was utilised mainly for augmenting foreign balances. The position was so comfortable that it was even possible in April this year to effect a repayment of Rs 65 crores to the IMF against the drawing in February 1974. Thus foreign balances held by the Reserve Bank stood at the record level of Rs 1,711 crores on June 18, 1976 against only Rs 632.89 crores at the end of March 1975.

increased balances

There has thus been an increase in foreign balances by as much as Rs 1078 crores in fourteen and a half months ended June 18, 1976 against only Rs 103 crores in 12 months ended March 1975. Allowing for the use of Oil Facility of Rs 207.15 crores in August last year, the net rise in the latter period has been quite sizable at Rs 871 crores while there was a net decline in 1974-75 to the extent of Rs 382 crores if borrowing from the International Monetary Fund and against the Oil Facility of Rs 484.70 crores are taken into consideration.

How has the significant inflow of foreign balances in recent months taken place ? It is not known as to what is the policy adopted periodically for crediting foreign balances and to what extent there has been an exaggeration in the rupee value of foreign balances, due to a fall in the external value of Indian currency. In earlier years, when the rupee was linked with sterling and there were no major fluctuations in the external value of the latter, there was periodic revaluation of foreign balances. The exaggeration on account of a drop in the value of the rupee, even if credits were taken for fresh inflow of foreign exchange at the prevailing rates, could not have been more than 10 per cent of the fresh additions to foreign balances. The net increase in foreign exchange reserves in real terms has in any case been sizable.

The heavy inflow of foreign exchange resources has resulted in an improvement in the balance of payments position to such an extent that even with a big trade deficit in 1975-76, the additions have amounted to virtually the retention of one year's net aid from the Consortium in the pipeline. The details relating to the balance of payments position for 1975-76 will be available only after some months and it will be possible only then to find out precisely how new inflows on capital and current accounts were helpful in building up foreign balances.

There has, admittedly, been an increase in remittances from non-resident Indians in foreign countries to their dependents in India. It has also been stated that tourist traffic on account of foreigners has been on a scale larger than ever before even with a net decline in world tourist traffic. The attractiveness of the Orient and relative cheapness of tourism in this country have probably been helpful factors.

new accounts

There has also been an increase in foreign balances due to the opening of the new bank accounts in designated currencies. It has been claimed by several banks that a sizable fraction of the additions to the deposits in the period under reference has been due to the accounts of non-resident Indians. Since the deposits of scheduled commercial banks in 12 month ended June 18, 1976 have risen by over Rs 700 crores, as compared to the previous 12 months in 1974-75, it may not be unreasonable to presume that new bank accounts in designated currencies were responsible for an increase in foreign balances by Rs 300-400 crores. There might also have been inflow of foreign balances from other sources because of the continuing strength of the rupee.

These capital inflows however may not amount to more than Rs 500 crores. Even so, there has been a net accretion to foreign exchange reserves on a dependable basis of about Rs 375 crores. This suggests that anti-smuggling operations have been very effective and the prevention of the earlier 'techniques' of compensatory financing has resulted in larger direct remittances in foreign exchange by non-resident Indians to the dependents in this country. If it is also remembered that the trade deficit of Rs 1,154 crores in 1975-76 was due mainly to massive imports of foodgrains, fertilisers and non-ferrous metals, there has been a tangible improvement in the balance of payments position and foreign balances would have risen even more spectacularly if a good part of fresh aid had not been utilised for augmenting buffer stocks of foodgrains and inventories of fertilisers and non-ferrous metals.

significant developments

What is therefore the significance of the latest developments? A definite view in this regard can perhaps be taken only in the light of fresh developments in the coming months and the success attending the efforts to eliminate unwanted or avoidable imports. It will, however, be justifiable to conclude that the improvement in agricultural production and power availability and the prevention of drain on foreign exchange resources in various forms have considerably strengthened the external payments position and reduced dependence on foreign aid. This assumption will be justified if the upward trend in foreign balances is maintained in the coming months, as it is likely.

The availability of dependable foreign exchange resources over and above the committed aid of the Consortium for 1975-76 should also enable the government to administer the liberalised import policy meaningfully and permit larger imports of particular items for preventing an unnecessary rise in prices or eliminating shortages if for any reason there was a rise in prices or increase in demand for particular goods and services on account of larger Plan expenditure. The Reserve Bank is

obviously confident that the foreign balances at its disposal will remain at high levels as in recent months sizable transfers of foreign securities have been effected to the Issue Department from the Banking Department. Foreign securities held in the former department have thus risen to 546.74 crores on June 18, 1976 from Rs 121.75 crores on February 27, 1976. Aggregate foreign balances have thus risen during this period to Rs 1,711 crores from Rs 1,157.42 crores. The accelerated net inflow is probably due also to a smaller trade gap in recent months.

Whatever may be the impact of favourable factors newly in operation, the Reserve Bank is probably feeling that operational balances in the Banking Department will be more than adequate if they were between Rs 1100 crores and Rs 1200 crores. Such a high level of foreign securities in the Issue Department has not been witnessed for over one and a half decades. If there has been real accession of strength to the balance of payments position as a result of a favourable turn in the terms of foreign trade and larger invisible receipts on current and capital accounts, the government can proceed confidently with the implementation of a bigger Plan and administer also its import policy imaginatively.

Tea prices and prospects

MR H.R. Shah's presidential address at the annual general meeting of the Tea Association of India, held in Calcutta on June 24, revealed that some of the problems of the tea industry were yet to receive sympathetic consideration from the government of India. He said that the industry in Darjeeling was "the hardest hit" and that because of heavy taxation and labour costs, many estates had not been able to take up development and maintenance work for many years with "disastrous effects". He observed that while the unit prices in Calcutta auctions rose by Rs 3.33 per kg in 1975-76 over 1973-74, the production cost per kg in 1975 rose by Rs 3.77 per kg over 1973. He remarked that the managements felt "very helpless" about this situation over which they had no control.

Mr H.R. Shah suggested that the government should give further relief to the Darjeeling tea industry by lowering the excise duty rate to the level of 10 paise per kg which is charged on green tea. New Delhi should favourably examine this suggestion. In the meantime, the managements of these tea gardens should also do their best to improve efficiency at all levels. It is inconceivable that so many gardens could have become chronically sick if their owners had managed them prudently and taken timely measures to make them viable. Incidentally, one wonders why the president of the Tea Association did not offer any comment on the measures now being taken by the government of India to deal with the problem of closed and sick units.

Mr Shah complained that the banks were not giving adequate assistance to the tea industry. He said that the actual amount which a tea company now had to find on its own, over and above the bank loan, was so large that there was need for raising the cash credit limit to 90 per cent or even 100 per cent. There were also other problems such as unsecured loans, commission on sales and credit facilities to the newly purchased sterling tea estates. Mr Shah revealed that some banks were not following the recommendations of the Reserve Bank although Dr R.K. Hazari, the Deputy Governor's attitude to the tea industry was helpful. Similar complaints have been made by many other industries also. The Reserve Bank should look into this matter and see to it that banks implement its directives especially in the case of industries such as tea which are so important from the point of view of employment and earning foreign exchange.

government incentive

Mr Mehta referred to the government's target of Rs 260 crores to be earned from the export of tea for the current season and said that this could be achieved provided certain incentives were given such as rebate of full excise duty on the exported tea. He remarked that this would not only ensure the present level of tea exports in quantity but would also give "tremendous encouragement" to exporters to put in more tea for export and also push up sales in those countries where consumption is low. There is, of course, a sound case for giving full excise rebate on exported tea. But it seems unlikely that this by itself will give such a big boost to exports as claimed by Mr Shah. It is equally important for industry to show initiative and enthusiasm in promoting exports to the traditional and the new markets. Mr T.S. Broca, the chairman of the Tea Board, who inaugurated the association's annual meeting, advised the tea growers to market their produce directly. He said that they should look and act beyond auction and not be content only with production. He also suggested that greater attention should be given to the export of packet tea which fetched Rs 16 crores in 1975-76 against Rs 9 crores in the preceding year.

The industry should certainly try to implement these proposals. But Mr Broca's view that the industry should not worry about the impact of the revaluation of the rupee in relation to the pound does not seem to be convincing. Mr Shah pointed out that the rupee earnings on tea exports would shrink at least by 15 to 17 per

cent and that since such fluctuations in the international market had become frequent, the government should give "some kind of export incentive linked to the revaluation or devaluation of the rupee in relation to pound sterling".

Mr Broca said that the increased price which tea was currently fetching at London auction—81 pence a kg compared to 43 pence in 1973—would offset the decline in the realisation in terms of rupees as a sequel to the fall in the value of the pound. The government however should carefully watch the situation and take timely steps so that the industry will continue to have the incentive to sell abroad in preference to the home market. It is worth noting in this context that the quantity of tea exported in 1975-76 was only 210 million kgs as compared to 233 million kgs in 1956-57. As Mr Shah rightly observed, "It is not sufficient to earn higher amount from tea exports through higher unit price because, at one stage, the total export earnings will start stagnating, once the unit prices become static. Higher exports in quantity year after year are equally important to augment our export earnings as well as to achieve our export target".

commendable efforts

Mr Shah said that the Food and Agriculture Organisation (FAO) of the United Nations was making "commendable efforts for making the international agreement on tea a reality". But the fact remains that FAO's estimates of production and consumption have proved to be quite inaccurate. Mr Shah said, "A comparative study of the past and present position of the world tea industry shows how forecasts in the past have been wide off the mark. A continued forecast of surplus teas over demand had helped in keeping the average price realisations in the world market depressed.

Surprisingly, a study of two to three years' world production figures shows no damaging accumulation of surplus to flood the market with a consequential crash in prices. In fact, all expected surpluses at the season ends were consumed. Only in the wake of the joint action by the OPEC, the commodities like coffee, tea, cocoa, etc. began commanding some respect from the advanced consuming countries, which has helped to better the average unit realisations overseas. Now the FAO (which so far forecast heavy surpluses) has taken the other extreme line of forecasting heavy shortfall in production over demand. The figures quoted by the FAO in the last meeting held at Rome in April this year forecast a shortfall in world tea supply over demand by 52 million kgs by 1985. Mr Shah said that growth in production is under-estimated and that the FAO secretariat should again send out its representatives to the tea producing countries and revise their estimates.

But how far will such revised estimates be realistic? Mr Shah observed that the discussion on buffer stocks in tea did not progress much at the FAO meeting as "tea was recognised to be a difficult commodity for such stocking because of its rapid deterioration in storage." But surely this fact must have been already well-known to those who initiated and participated in the discussions. A major obstacle to international cooperation on tea seems to be the lack of unanimity of views between the old and the new producers. The latter do not favour any arrangement which curbs their expansion in production or exports. Nevertheless, efforts should continue to be made through the FAO and other forums to arrive at some arrangement which will be in the interest of all tea producing countries. Meanwhile, New Delhi should take appropriate measures to improve the industry's competitive capacity.

Railways : room for improvement

THE DRAMATIC improvement in the working of railways since the declaration of the emergency in June last year, indeed, is heart-warming. Late arrival of trains, widespread ticketless travel, frequent pulling of alarm chains for unscheduled stoppages, increasing thefts and pilferage of railway property and consignments and sloth at the various rungs of this largest departmental undertaking had marked its operations earlier for not an inconsiderable period with the result that despite successive increases in passenger fares and freight rates for several years, the budgets had shown sizeable deficits. To some extent, the stepping up of passenger fares and freight rates, of course, was not unjustified in view of the mounting operational costs due to factors beyond the control of the railways. But the hopes entertained after each upward revision of fares and freight rates that the undertaking would be able to make up its losses were persistently belied.

The picture today is indeed reasuring. Besides the general improvement in passenger amenities, cleanliness of coaches, etc, the punctuality of train arrivals at destinations now averages over 96 per cent — in some zones even cent per cent — as against barely 60 per cent before the declaration of the emergency. The incidence of alarm chain pulling, which averaged 28,800 cases per month in June last year, came down sharply to 18,353 cases in July last and thereafter has been of the order of only 7,000 to 8,000 cases each month. Ticketless travel, which was estimated to cost

the undertaking nearly Rs 25 crores per annum, is claimed to have been eradicated to a very large extent. During the nine months to March last, special checking efforts were said to have netted nearly Rs 3 crores additional revenue, besides increasing substantially the window sales of tickets—during the whole of 1975-76, the window sales aggregated to 2865.5 million tickets, as against 2429.3 million in the previous year. The long queues for reservation of berths have disappeared following concerted efforts made to bring to an end the activities of unauthorised travel agencies. The congestion in trains has gone down vastly not only as a result of the drive against ticketless travel but also owing to the increase in capacity effected by introducing as many as 183 new trains—72 non-suburban trains and 111 suburban trains—extending the run of 62 trains and bringing 18 trains on broadgauge and one on metregauge under diesel traction. As many as 600 holiday specials have been planned recently from different cities to clear the summer-holiday-rush of passengers.

significant point

Of much greater significance from the revenue point of view, however, is the fact that the undertaking has been able to attract and move as much as 222 million tonnes originating traffic during 1975-76 — 12 million tonnes more than the target for the year and 14.06 million tonnes more than the previous record attained in 1969-70. This figure has substantially exceeded even the revised estimate of 214 million tonnes which was put forth by the minister for Railways, Mr Kamlapati Tripathi, in his this year's budget speech and also the figure of 217 million tonnes which he had hoped would be the final tally. This implies that the last year's deficit of the railways should ultimately turn out to be about Rs 15 crores less than the revised estimate of Rs 62.81 crores.

The above encouraging trend in goods traffic is stated to have continued in the first two months of the current financial year also. If the next kharif crop is even normal and industrial activity grows at the anticipated rate of 8 to 10 per cent, the traffic this year should grow at a much faster rate than last year when the growth in industrial output was not more than 5.5 per cent. This, indeed, should have a very salutary effect on railway finances and should enable the undertaking to throw up a larger surplus than Rs 8.98 crores estimated by the Railway minister.

targets over-reached

The administration hopes to fully cater for whatever traffic is offered this year. The budget estimates of 11 million tonnes increase in originating goods traffic, including the departmental traffic, over the last year's revised estimate of 214 million tonnes and four per cent growth in passenger traffic should, in fact, turn out to be significant underestimates in the light of the above. The railways, however, are not worried about it. They would like to attract as much traffic as possible for despite substantially increased loadings, the outstanding demand for wagons, which stood at 135,500 numbers on the broadgauge and 166,000 numbers on the metregauge systems in the beginning of 1975-76, has now come down to just 6,200 wagons and 6,000 wagons, respectively.

So far as passenger traffic is concerned, the overcrowding in compartments, as mentioned earlier, has been eradicated to a great extent and the passenger-carrying capacity is being augmented through various means. With a view to attracting as much high-rated goods traffic as possible, specialised services such as the quick transit service and the container services have been extended considerably. Super express goods trains are now running to fixed timings between the cosmopolitan cities of Delhi, Calcutta, Bombay and Madras and other important commercial centres. The high-rated traffic susceptible to diversion to road transport has been fully freed from the constraints of operating restrictions and quota limitations.

Equally significant has been the progress achieved by the various production and maintenance units of the undertaking. The marked improvement in both the passenger and goods carrying capacities last year, in fact, has resulted from the increased productivity in railway workshops which enabled them to overhaul monthly on an average 33, 14 and 10 per cent more of wagons, coaches and locomotives compared to the pre-emergency period. Concerted efforts at clearing the backlog of maintenance are envisaged to be continued this year. This is expected to provide a good cushion for the increased traffic offerings this year even if they exceed the budget estimates.

import substitution

The production units of the railways at Varanasi, Chittaranjan and Parambur have been able to raise their output significantly, besides furthering the drive for import substitution. The swadeshi drive launched in August last has resulted in an annual saving of foreign exchange to the order of Rs 5.17 crores. As many as 181 items were taken off the import list during the nine months to March last. The Diesel Locomotive Works (DLW) at Varanasi was able to indigenise 34 items valued at Rs 3.89 crores, the Chittaranjan Locomotive Works (CLW) 140 items valued at Rs 1.08 crores and the Integral Coach Factory (ICF) at Parambur one item valued in Rs 20 lakhs. A major breakthrough was achieved in the manufacture of such items as cylinder liners for Alco locomotives, cylinder heads and brake items. A mobile exhibition displaying about 500 items still on the import list has been organised to induce indigenous entrepreneurs to take up the

production of these items. This exhibition has already visited during the last 100 odd days all the important industrial centres in the north and east India and will be shortly moving on to the southern, western and central parts of the country. The DLW and the ICF are currently producing diesel locomotives and coaches to the order of 130 and 700 units per annum.

export drive

The undertaking has also embarked upon an extensive export drive. Its various production units have been able to secure during the last 12 months export orders for locomotives and coaches worth nearly Rs 10 crores which are to be executed by the end of the next calendar year. Exports of railway equipment during 1975-76 from these production units aggregated to just Rs 3.53 crores. A number of new orders have also been received by the wagon-building industry from various countries. Consultancy services have been offered by the railways to several African and west Asian nations. A significant breakthrough achieved in this respect has been an agreement with Ghana for the provision of services for improving the railway operations there. The contract will earn for the railways $ 66,000. Bids have been tendered for the provision of consultancy services to the Nigerian and Iraqi railways.

The impressive improvement in the operational efficiency of the undertaking since the declaration of emergency in June last year, however, can be expected to pose a new problem for it. The traffic carrying capacity available with it at present, which has got augmented substantially through the clearance of backlog of maintenance, may have to be raised to a much lower extent now than would have been the case in the pre-emergency period, to cater for the current Plan-end requirements. This may induce the Planning Commission to reduce allocations for the development of railways. It, indeed, will be a pity if the allocations for development are made inversely proportional to the increase in efficiency. The momentum gathered by the railways during the emergency obviously ought not to be lost in the long-term interests of the country. Transport bottlenecks have often caused many complications in the country's economy in the past. They ought to be avoided in the future. In the infrastructure field, it is always desirable to create some surplus capacity which can be marshalled to cater for unexpected growths in traffic, particularly in the years of bumper harvests. Some surplus capacity also will keep the railway administration on its toes for attracting traffic, which can never be the case if the traffic carrying capacity is even marginally short of requirements. A sellers' market breeds complacency. Let not the railways lose the momentum that has been gained now.

Another important aspect on which the railway administration has to bestow increasing thought is the crime on running trains. The theft and pilferage of railway property and consignments, no doubt, have been contained a good deal through the various measures taken recently to curb the activities of the anti-social elements working on the railways, as well as the drive launched against wagon-breakers and receivers of stolen railway property. But several cases of dacoities on running trains have been reported in the recent months. Though it is a law and order problem to a great extent to be handled by the state governments, the railway protection force can also be geared to this task to greater extent. The implementation of the recommendations of the one-man expert committee on railway security and protection, which covered the legal structure, powers, working procedures and leadership of the railway protection force as well as the government railway police of the state governments, should go some way in improving the situation. The processing of its recommendations needs to be expedited.

Eastern Economist 30 Years Ago

JULY 12, 1946

The recent giant conversion of the 3½ per cent Government paper has been generally welcomed as a wise act of financial statesmanship opening up a new era of cheap money. Its benefit to the Government in the shape of reduced interest on existing indebtedness and lower rates on future borrowings has been emphasized. Its advantage from the point of view of the economical financing of the large reconstruction expenditures of the Government has been particularly stressed. But there are others who doubt the wisdom of cheap, at any rate cheaper, money. This school of critics is not confined to India. Even in Britain and and U.S.A. where cheap money is recognized as the bedrock of economic policy, there are many who doubt the wisdom of further cheapening of money. In India this school of thought is not impressed by the movement of cheap money in U.K. and U.S.A. because not only are conditions in India regarding capital formation, savings and investment very different from those in other countries, but in the immediate post war transition period when inflation is yet to be held in check, cheap money can only lead to a bad boom. No less a person than Sir Purshotamdas Thakurdas recently said that the cheap money policy which is maintained by the weight of Government disbursements, combined with a number of factors unfavourable to private spending, and enforced with such determination by the Executive, connotes a rude disturbance to India's economic normality instead of being an effort to build it up.

Capital's Corridors

R. C. Ummat

Oil exploration • IFFCO's progress

THE OIL and Natural Gas Commission has drawn up an ambitious, time-bound programme for oil exploration on-shore. This, of course, does not imply that off-shore exploration is to be slackened. What is aimed at is that side by side off-shore exploration at a fast rate, on-shore exploration would be stepped up. On-shore exploration in the last three or four years has been at a comparatively low ebb.

The Finance ministry and the Planning Commission have already allocated Rs 350 crores for on-shore exploration during the terminal three years of the current Plan period—Rs 110 crores for the current financial year and Rs 90 crores each for the next two years. They have been approached to raise this allocation by Rs 70 crores--Rs 10 crores for this year and Rs 30 crores each for the next two years.

new concepts

Disclosing the above in a talk with pressman here last week, Mr K.D. Malaviya, the union minister for Petroleum and Chemicals, indicated that new geological concepts had made it possible to hunt for hydrocarbons in areas where this search was considered fruitless till lately. This, however, involved deep drilling. But even then on-shore exploration would not cost as much as off-shore exploration.

The on-shore areas proposed to be taken up for the drilling include the foredeeps of the Himalayas, including Ram Shahr and Jwalamukhi in Himachal Pradesh, some regions of the Gangetic basin extending from Bihar to Jammu, northern areas of the Brahmaputra river in Assam, west Rajasthan, Saurashtra and Godavari and Mahanadi basins. Exploration in Himachal Pradesh is proposed to be resumed by September-October this year.

Several deep drills have been secured for the purpose. Exploration, however, is not to be undertaken by the ONGC drillers alone. Foreign contractors are also envisaged to be engaged on fee payment basis without any share in the oil found or produced so that quick results can be obtained.

better drills

The new rigs which have been purchased recently can drill up to a depth of 4,500 to 6,000 metres. Such depths have not been tested before in this country. Drilling had to be abandoned earlier at much less depths due to such problems as high pressure and pipe-sticking.

Another important step that is being taken to expedite on-shore exploration is the use of helirigs in thickly forested areas where exploration through the conventional means of building approachable roads for moving equipment is a prohibitive proposition. The services of US contractors will have to be secured for this purpose.

Off-shore exploration in the Bay of Bengal and the Gulf of Cambay, where drilling was undertaken by foreign explorers last year, is understood to have failed to yield any worthwhile discovery. The future programme for these two areas is expected to be finalised shortly.

Meanwhile, the development of production potential to the targetted levels in the Bombay High area is being carried on vigorously. The flow of the two production wells already commissioned in this area has been doubled through acidisation.

As 95 per cent of the oil industry in the country has already come under government ownership following the take-over of the Esso and Burmah-Shell refineries and distribution networks in the last three years, a reorganisation of the oil industry is proposed to be undertaken shortly to make optimum use of the existing assets and to maintain a high standard of service to consumers. Some proposals have already been formulated in this connection. The views of the concerned interests are envisaged to be elicited before finalising them.

The Damle Committee on distribution of petroleum products, which submitted its report to the government last week, has called for economies in distribution costs and has suggested measures for checking malpractices in the distribution system. It has expressed the view that the oil companies must shoulder the responsibility of providing petroleum products to consumers in correct measure and the requisite quantities at the prescribed selling prices.

integration of companies

The committee has suggested complete integration of storage and distibution facilities of all the oil companies operating in the country. It has emphasised the need for machinery for correctly assessing the demand for petroleum products and clearly demarcating the functions of the oil companies the oil coordination committee and the ministry.

The establishment of multipurpose distribution centres, particularly in the rural areas, has been commended by the committee. It has recommended that more such centres should be opened.

* *

The Indian Farmers Fertiliser Cooperative Limited (IFFCO)—Asia's largest fertiliser producing unit in the cooperative sector—indeed, has done well during the very first full year of its commercial operations. It has earned

during the cooperative year ending June 30, 1976, a net profit of Rs 2.22 crores, which will go a long way in clearing the accumulated losses of the previous years aggregating to Rs 3.02 crores.

Whereas during the 1974-75 co-operative year, the undertaking produced in a little more than three months of commercial operations about 62,862 tonnes of ammonia, 56,408 tonnes of urea and 60,006 tonnes of NPK fertilisers, the production went up during the 12 months to June 30, 1976, to as much as 181,337 tonnes of ammonia, 240,205 tonnes of urea and 171,644 tonnes of NPK, as against the installed capacity of 300,300 tonnes of ammonia, 396,000 tonnes of urea and 475,200 tonnes of NPK. Production is envisaged to be stepped up significantly further during the 1976-77 cooperative year to 258,000 tonnes of ammonia, 325,000 tonnes of urea and 225,000 tonnes of NPK.

interesting fact

An interesting fact that has emerged from the operations of the undertaking up to June 30, 1976, is that whereas the total foreign expenditure on setting up its two plants at Kalol and Kandla had been of the order of Rs 27 crores, the saving in foreign exchange already effected has been of the order of as much as Rs 90 crores. A further saving of Rs 68 crores is expected to accrue during 1976-77. The contributions of the undertaking to the central and states exchequers by way of pool equalisation charges, excise duties, customs duties, sales tax, etc, since the start-up of commercial operations has exceeded Rs 25 crores, besides payments to the railways by way of freight aggregating to over Rs 6 crores. Another noteworthy feature has been that with a view to stepping up the aggregate national production of fertilisers to the extent possible, the undertaking supplied during 1974-75, 10,000 tonnes of anhydrous ammonia in special tank wagons to the Trombay unit of the Fertiliser Corporation of India.

Though better placed compared to the other manufacturing units in the country by virtue of its equity being held by co-operative societies which have to take up production in proportion to their shareholding, no efforts are being spared by IFFCO in promoting the use of fertilisers by farmers through holding farmers' meetings, field demonstrations, distribution of literature explaining the benefits of balanced fertilisation, etc. Another important measure taken in this regard is the adoption by the undertaking of 65 villages for integrated agricultural development. By the end of this year, the number of such villages is envisaged to go up to 200.

It is also planned to set up at Phulpur as part of a new manufacturing unit to be established there, a farmers' training institute with three objectives in view: (a) communication of the message of modern agriculture to farmers in a way that they adopt it, (b) development of professional leadership amongst young farmers so that they become message-carriers for others, and (c) establishment of a model farm to create awareness among cultivators regarding the potential benefits of scientific agricultural technology. The first course of training in this institute is intended to be started during the current cooperative year.

The Phulpur project, with a capacity of 500,000 tonnes of urea based on naphtha, is expected to cost Rs 168 crores out of which the foreign exchange expenditure would be around Rs 98.10 crores. A loan to cover the foreign exchange component has been provided by the World Bank. The balance of the resources are expected to be raised by the undertaking through increase in equity capital, ploughing back of its profits from the Kandla and Kalol projects and loans from Indian financing institutions. The equity capital is expected to be subscribed to the extent of about Rs 22 crores by cooperatives and Rs 31.2 crores by the government of India. The work on the project is proceeding well. Arrangements for design, engineering and construction have already been finalised with renowned contractors in India and abroad. Construction is expected to be completed by the end of 1978. Commercial production is anticipated to commence in 1979.

With the growth in its capacity and production, the society is extending the area of its membership which at present covers the states of Gujarat, Haryana, Madhya Pradesh, Maharashtra, Rajasthan, Punjab, Uttar Pradesh, Tamil Nadu, Karnataka, Andhra Pradesh and Delhi. The new states from which membership is to be enrolled this year include West Bengal, Bihar, Orissa and Himachal Pradesh.

As a result of the four reductions effected by the government in fertiliser prices since July last year, the provision of a subsidy of Rs 1,250 per tonne of P_2O_5 and the other measures taken to induce demand, the off-take of fertilisers by farmers is stated to have improved in the recent months.

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POINT OF VIEW

Agricultural credit

Dr V. V. Desai

The author believes that the establishment of SFDAs and MFALs, the reconstitution of cooperative banks and the measures taken under the 20-point economic programme will help bridge the gap between supply and demand of agricultural credit.

PAUCITY OF adequate financial resources even for carrying out normal farming activities has hitherto been a major constraint in agriculture though it has been the predominant sector of the national economy. Generation and reinvestment of savings as an internal source of finance are inconceivable because of the subsistence nature of agriculture characterised by perpetual dissavings and deficits. Agriculturists have been compelled to have recourse to the external sources such as money lenders, traders or other institutional agencies for meeting various expenses. Thus, "agriculture is dependent upon outside finance for its development."[1]

temporary transfer

Procurement of funds from external sources cannot ordinarily[2] be claimed by a farmer as a matter of right but more so a matter of his credit. Mellor defines credit "as a device for facilitating the temporary transfer of purchasing power from one individual or organisation to another."[3] In the words of Herrick, "credit is that form of confidence reposed in a person which enables him to obtain from another the temporary use of thing or value."[4] This signifies credit as the temporary means of raising funds for defraying various obligations. Normally, a periodic cycle of borrowing, followed with repaying, which is to be maintained in the interests of both the borrowers and lenders, improves the creditworthiness of the former, as the frequency of the cycle increases over the period of time. Canalisation of borrowed funds in non-productive lines obviously impedes the cyclical flow of funds. This cycle is not maintained in agriculture because of continuous borrowings followed with irregular repayments, and hence, agriculturists always remain under heavy debts. Their entire credit turns into a backlog of debt.

different purposes

Farmers borrow funds mainly from non-institutional agencies[5] for different purposes and periods in order to meet their farm and non-farm expenses. Since there are various dimensions for credit, viz., purpose, period and nature, it is classified on the basis of these aspects, as depicted in Table I. Yet period-wise classification, viz., short, medium and long term credit, is most comfortable and prevalent in statistical returns and and feasible for analysis. Short-term credit is provided for meeting the seasonal requirements of working capital comprising mostly the items of revenue expenses. Funds are lent on medium and long term basis for livestock, repairs and maintenance of farm machinery, and purchase of machinery or redemption of outstanding debts.

Whatever may be the classification, aggregate credit requirements of farmers vary from season to season, region to region and from crop to crop. Under these varying conditions on the one hand, and inadequate statistical information regarding individual credit needs, on the other, it is an arduous task to estimate the aggregate credit requirements for agriculture. However, a few attempts have been made by economists to formulate the models applicable at microlevel for estimation of credit requirements. Since all of them cannot be discussed here, only two of them are explained in brief.

I. Singh and Gupta model

Singh and Gupta[8] have designed a micro-model for estimating short term credit requirements of a farmer by taking area under cultivation and capital inputs in a given farm into consideration. Accordingly:

$$(1)\quad Y_i = R_i \sum_{j=1}^{m} P_{ij} X_{ij}$$

Where

P_{ij} = Capital Inputs per acre in the ith farm

R_i = Proportion of Credit to Capital inputs on ith farm

X_{ij} = Area under jth crop on ith farm

Y_i = Credit Requirements

and they have taken the values of

$R_i = 0.50$ ...Small Farms

$R_i = 0.45$ ...Medium Farms

$R_i = 0.40$ ...Large Farms

Further, credit requirements for a block would, therefore, be

$$(2)\quad C = \frac{A_t}{A_s} \sum_{i=1}^{k} n_i Y_i$$

Where

A_t = Total Cultivated Area in a Block

A_s = Sample Holdings

n = Number of Holdings

In this simple model, the authors believe that the amount of credit, which bears certain proportion with total

capital inputs, expands in the multiple of area under cultivation. However, the model does not provide any explanation for the constants of R_1 chosen by the authors. Yet, the attempt in identification of relationship is quite commendable.

II. regression model

The amount of fund required to be borrowed is functionally related to the cost of exogeneous inputs like fertilizers, canal water, etc., net operated area and other investments, hence, regression equations of the following type are sometimes suggested by economists:

$$(3)\quad Y = AX_1^{b}X_2^{b}X_3^{b}X_4^{b}$$

$$(4)\quad C = aX_1^{B}X_2^{B}X_3^{B}X$$

Where

Y = Total returns from crop

X_1 = Investment on Irrigation Equipments

X_2 = Investment on Draught Cattle

X_3 = Expenditure on Fertilizers

X_4 = Area Cultivated

C = Amount of Credit required

And, $b_1 \ldots b_n$, and

$B_1 \ldots B_n$ are respective regression coefficients.

While equation (3) measures the impact of independent variables taken into consideration on farm returns, equation (4) suggests the relationship between required borrowings and farm inputs and investments. This model, which is applicable in individual cases, has a limited use because it does not incorporate all the related variables which cause to raise the amount of future borrowings. Since regression coefficients vary from region to region, the model is not suitable for estimating total credit requirements for agriculture as a whole.

III. panel's approach

The All-India Rural Credit Review Committee, 1969 had appointed a panel of economists headed by Dantwala[8] for estimating agricultural credit requirements during the period of the fourth five year Plan. This panel adopted the following approach for revising the estimates prepared by the working group set up by the Agricultural Production Board, government of India:

(a) The amount of credit required bears certain relationship with the value of agricultural produce. This ratio of credit produce for 1961-62 was applied to the produce of 1966-67 and 1970-71 at 1965-66 prices; and

(b) The per acre average borrowing was multiplied to the estimated net

TABLE I

Classification of Agricultural Credit

	Items of Expenditure
Purpose (RBI Rural Credit Follow-up Survey)[6]	
1. Capital Expenditure	Purchase of land, land reclamation, construction and repairs of bunds, wells and irrigation sources, purchase, repairs and construction of farm houses, purchase of farm machines, their repairs, replacement, additions, etc.
2. Current Expenditure	Purchase of seeds, manures, fodder, hire charges of water, machines, etc. and wages, rent, land revenues, cess, and other expenses.
3. Capital Expenditure on Non-Farm Business	Purchase, construction, repairs, additions and maintenance of houses, production equipment, transport equipment, furniture, etc.
4. Family Expenditure	Purchase of clothes, utensils medical and educational expenses, litigation, birth, marriage and death ceremonies, etc.
5. Repayment of Debts	Repayment of debts and interest.
6. Other Expenditure	Purchase of bullion, ornaments, shares, certificates, bonds, etc., life insurance premium.
7. More than One Purpose	Expenditure incurred jointly on any two or more purposes referred to above.
Period	
Period (Cooperative Act)	
1. Short-Term	Recurring expenses for the period not exceeding 15 months.
2. Medium-Term	Expenses on farm assets of temporary nature, like deepening of wells, reconstruction of wells, etc., for the period not exceeding more than 60 months.
3. Long-term	Covering a period of 5 to 20 years, redemption of debts, purchase of heavy machinery, like tractors, construction of wells etc.
Nature (The Venektappiah Committee)[7]	
1. Consumption Credit	Personal, domestic and non-farm expenses.
2. Production Credit	Farm expenses of recurring nature and related to agricultural operations.
3. Investment Credit	Expenses incurred on permanent additions and improvement of farm assets.

acreage under cultivation in 1966-67 and 1970-71.

In order to make the allowance for rising prices the estimates were inflated by 25 per cent. This design may be expressed in language of mathematics as :

First Method

$$(5)\quad C_{66\text{-}67} = \frac{C_{61\text{-}62}}{P_{61\text{-}62}} \times P_{66\text{-}67}$$

$$(6)\quad C_{70\text{-}71} = \frac{C_{61\text{-}62}}{P_{61\text{-}62}} \times P_{70\text{-}71}$$

Where

C=Amount of Credit/Borrowings

P=Value of net Agricultural Produce

By inflating both the values by 25 Per cent,

$$(7)\quad CF_{66\text{-}67} = C_{66\text{-}67}\ (1+0.25)$$

$$(8)\quad CF_{70\text{-}71} = C_{70\text{-}71}\ (1+0.25)$$

CF=Final estimates of Credit Requirements.

Second Method

$$(9)\quad C_{66\text{-}67} = b \times A_{66\text{-}67}$$

$$(10)\quad C_{70\text{-}71} = b \times A_{70\text{-}71}$$

Here

b=Per Acre Borrowings

A=Net Acreage under Cultivation

By inflating these estimates

$$(11)\quad CF_{66\text{-}67} = C_{66\text{-}67}\ (1+0.25)$$

$$(12)\quad CF_{70\text{-}71} = C_{70\text{-}71}\ (1+0.25)$$

The estimates of credit requirements were further developed by taking household expenditure and current farm and non-farm expenditure into consideration,

Thus

$$(13)\quad CF_{70\text{-}71} = (CE+HE)_{70\text{-}71}$$

$$(14)\quad CF_{70\text{-}71} = (CE+0.75\ HE)_{70\text{-}71}$$

Where,

CE=Current Expenditure on farm and non-farm business.

HE=Household Expenditure

The estimates of short term credit requirements prepared by the working group as well as by the panel are presented in Table II. Although the estimates are not comparable on account of difference in methodologies of the working group and the economists' panel, the estimates of the latter are somewhat higher than that of the former. However, the review committee made further exercise in identifying the magnitude of cash and kind components of total credit needs for the year 1973-74. While segregating into cash and kind components, certain assumptions were made by the committee. In regard to cash component its suppositions were, that

(i) cultivators holding more than 20 acres need no credit for cash expenses, and

(ii) as a result of implementation of land reforms, subdivision and fragmentation, sale of land, etc, 33 per cent or one third of the holdings was not cultivated, and therefore only two-third of the area was taken into account[10].

In determining the kind components, it was assumed:

(i) that, of the acreage under high yielding varieties, a sizeable part will be accounted for, by 1973-74, by farmers who will have reached a stage of financing to a substantial extent;

(ii) that the cultivators of unirrigated areas will, by and large, not command 'own' resources of any significant volume and will, therefore, need to rely proportionately on borrowing for the costlier inputs; and

(iii) that the cultivators raising commercial crops on irrigated areas will need much support by way of credit for their purchase of inputs and may, in fact, depend even less on credit than the HVP category[11].

On the foundations of these considered views, the Committee estimated the total production credit needs for the year 1973-74 to the tune of Rs 2,000 crores as presented in Table III. Of the total credit requirements, 41.3 per cent was expected to be claimed in the form of kind, like fertilizers, pesticides, seeds, etc. According to the Committee, per acre credit needs for unirrigated area are lowest though the magnitude of cash requirements are highest. Only in the case of HVP farmers borrowings were expected to be less in the form of cash. It is interest-

TABLE II

Estimates of Short Term Credit Requirements for 1970-71

(Rs in crores)

Particulars	Estimates
Working Group	1106
Economists Panel	
Method First	
Eq. 13	1228
Eq. 14	1011
Method Second	
Eq. 13	1341
Eq. 14	1174

TABLE III

Short Term Credit Requirement in 1973-74

(Rs in crores)

Category	Area (Mn acres)	Kind	Cash	Total	Per acre credit need in Rs
HVP	60	475	374	849	141
Non-HVP	69	196	214	410	60
Unirrigated	293	156	585	741	25
Total	422	827	1173	2000	—

ing to note that the share of the HVP category in the total credit needs comes to 42.5 per cent though it covers not more than 14.2 per cent of the total cultivated area. This signifies an exorbitant expansion in demand for credit, if HVP is extended further over a large area.

In so far as the estimation of medium-term credit needs is concerned, the Committee candidly accepted its nonsuccess in the wake of changing concepts and contents of medium-term loans and endorsed the estimates of the Working Group, which put it at Rs 500 crores for the fourth Plan. However, in the case of long-term credit requirements, the committee appointed a technical committee on long-term credit. The committee laid major stress on schemes of minor irrigation and provision for machinery and implements in conformity with the basic purpose of bringing about permanent improvement in land and farm assets. Thus, the aggregate amount of funds required for credit for the fourth Plan period was estimated to be of the order of Rs 4,000 crores as below:

	Crores of Rs
1. Short Term	2,000
2. Medium Term	500
3. Long Term	1,500
Total	4,000

In view of the increasing accent on HVP and mechanization in the country during the fifth Plan, the demand for agricultural credit may further expand as much as to Rs 5000 crores by the end of 1978-79.[12] As a matter of fact, actual agricultural borrowings are likely to soar further in the wake of rising cost of cultivation resulting from an upward movement of prices of agricultural inputs including wages. Another additive factor would be the structural changes in operational holdings as a consequence of land reform measures. Such an expansion of alarming proportions will be an uphill task for the agencies providing agricultural credit.

"Agriculturists in India were primarily depending for their credit needs on the non-institutionalised sector consisting of private money-lenders, landlords, traders, etc., who together accounted for as much as 93 per cent of the total borrowings of the cultivating households in the country in 1951-52."[13] Their intractable role in dispensation of agricultural credit for all and sundry purposes was in fact a challenge to the institutional agencies. The institutional agencies commanding ample resources rather failed to compete and drive them out from the field of agricultural credit. Their dominance on the rural scene was perceptible at least till 1961, as may be witnessed from Table IV. During a period of one decade i.e. from 1951 to 1960, the shrinkage in the proportionate share of total individual agencies was as little as 9.7 per cent. When the situation did not alter favourably, the government was constrained to resort to legislative measures. Ultimately, under the 20-point economic programme of the prime minister, the government of India declared a moratorium on rural debts from money-lenders and this has given the final and fatal blow to the system of private money-lending business in rural areas, and paved the way for institutional agencies. Now, there exit the following agencies from which farmers can directly borrow:

1. Primary agricultural cooperative societies,
2. State governments,
3. Primary land development banks.
4. Commercial banks, and
5. Regional banks.

Primary Agricultural Credit Societies: These primary units at a village level are functioning as flood-gates through which funds are directly supplied to the farmer-borrowers. Since they are the basic functionaries in credit dispensation, their financial strength and effectiveness in lending operations cannot be simply glossed over on any ground. Inadvertance and indifference of upper bodies in the structural

TABLE IV

Shares of Agencies in Agricultural Credit

(Figures in percentage)

Agency	Borrowings of rural households	
	RCS	DIS
	1951	1960
Government	3.1	2.3
Cooperatives	2.9	13.8
Commercial Banks	1.1	0.7
Relatives	14.4	8.8
Landlords	2 0	0.7
Agri. Moneylenders	24.8	33.9
Professional Moneylerders	43.8	12.7
Trader and Agents	6.1	10.1
Others	1.8	17.0
Total	100.0	100.0

RCS = All-India Rural Credit Survey, 1951
DIS = All-India Rural Debt and Investment Survey, 1960

hierarchy of cooperative system in mid-sixties resulted in the liquidation of a large number of societies. This was clearly visualised by the Committee on Cooperative Credit,[14] and as a result, it recommended that "the functioning of strong and viable units at the primary level is an urgent need as much for the sound working and health of the entire co-operative credit structure." However, soon after amalgamation and reconstruction of these societies, they made an impressive record in disbursement of credit as may be witnessed from Table V.

seasonal loans

In the course of the last quinquennium i.e. from 1965-66 to 1970-71, the amount of total loans outstanding increased from Rs 427 crores to Rs 784 crores which was almost double. In subsequent periods, too, societies made the persistent efforts in channelling the funds for agricultural purposes. Expansion in short term credit is conspicuous as compared to medium-term loans, signifying, therefore, that their activities are mainly confined to advancing of loans for seasonal purposes, which are usually of recurring nature. Normally advances are granted by the societies mainly for purchase of seeds and fertilizers, which constitute, according to Table VI, about 90 per cent of the total short-term advances. The remaining share of 30 per cent goes to other purposes like purchase of implements, marketing of crops, processing of goods, etc. In the case of medium term-loans, major share of funds is directed towards unspecified agricultural purposes, moreover, such advances are granted even for non-agricultural purposes.

Another important feature of the primary agricultural credit societies is their special preference for medium and big farmers, as the sizeable chunk of their funds is purveyed for meeting their credit needs. This is discernible from a cursory perusal of Table VII which indicates that hardly 12 per cent of their total loans and advances were granted to the weaker sections of the agricultural sector including agricultural labourers. The reason generally ascribed to such inclination is their practice of security-oriented lending which is justified on the ground of strengthening their financial health. This is, however, contrary to the very spirit of the Venketappiah committee[15] which pertinently recommended, that "short-term production credit should not be made dependent on the borrower's ability to provide mortgage security and, therefore, there should be no arbitrary and unduly low ceilings on the amount which may be provided against personal sureties."

Despite these inherent drawbacks, their achievements from 1965-66 onwards is commendable even when there is a growing competition with commercial banks. The day is not far when they will be raised to the

TABLE V

Loans Outstanding

(Rs in crores)

Year	Short-term	Medium-term	Total
1960-61	...	...	218
1965-66	356	71	427
1970-71	647	137	784
1971-72	696	162	858
1972-73	721	258	979

TABLE VI

Purpose-wise Distribution of Loans

(Rs in crores)

Purpose	1971-72	1972-73
A. Short Term:		
1. Seeds and Fertilizers	485.80	554.77
2. Implements	6.60	5.94
3. Marketing of Crops	19.32	19.25
4. Processing	4.60	3.46
5. Industrial Purposes	0.20	0.38
6. Consumption	5.24	6.12
7. Other Purposes	19.09	22.83
Total	540.94	612.75
B. Medium-Term		
1. Sinking and Repairing Wells	9.10	11.44
2. Purchase of Machinery	11.06	13.50
3. Purchase of Cattle	12.47	10.78
4. Minor Land Improvements	4.29	5.11
5. Other Agricultural Purposes	21.87	71.74
6. Other Non-agri. Purposes	14.79	50.77
Total	73.58	163.34
Grand Total (A+B)	614.52	776.09

status of rural banks, provided they maintain the same zeal and momentum.

Primary Land Development Banks: As recounted earlier, long-term capital investment in agriculture is also needed for the improvment of farm capital assets like land, machineries, etc. Funds for capital investment are needed for a longer time and in larger size which make it imperative to have a separate institution within the structure of cooperative credit. Such institution at a village level is a primary land development bank which grants loans and advances for individual farmers for specific purposes like desilting and digging of wells, purchase of farm machines, conversion of dry lands into wet, etc.[16] These banks lend funds against the security of lands.

dormant state

Like primary agricultural credit societies, these banks which were formerly known as land mortgage banks, were in the state of dormancy till 1960-61 when their total advances were of the order of Rs 24.66 crores. In the subsequent quinquennium i.e. from 1960-61 to 1965-66 their lending operations shot up to the level of Rs 124 33 crores registering the net increment of about 400 per cent. There was commendable expansion in their loaning business particularly during 1965-66 to 1970-71. Over the period of one decade primary land development banks raised the supply of total credit by 20 times.

TABLE VIII

Long-Term Agricultural Credit

(Rs in crores)

Year	Loans Outstanding
1960-61	24.66
1965-66	124.33
1970-71	448.27
1971-72	516.30
1972-73	446.82

In order to intensify and expedite the financing activities of PLDBs, the committee, constituted by the Reserve Bank of India in March, 1973 under the chairmanship of K. Madhav Das, recommended in its report, submitted in December, 1974, that "the diversification of loaning operations and linking of the targets of lending of LDBs to specific schemes of agricultural development in each state are of considerable importance."[17] In this connection, it laid much emphasis on mobilization of rural savings and routing of loans through primary agricultural credit societies. The committee strongly deprecated the practice of accepting the mortgage of land for security of loans so granted, as it is contradictory to the basic features of the production-oriented lending system expected to be followed by them. Adherence to these recommendations by PLDBs will help create a new climate and enable them to meet the mounting demand for credit consequent on the steady transformation of agriculture.

Government : Long before the emergence of credit institutions the government entered into the field of rural credit in the form commonly known as Taccavi Loans under the provisions of the Land Improvement Act, 1883 and the Agriculturists Loans Act, 1884. The literal meaning of Taccavi (tagai) is strengthening, assisting or corroborating, but according to the official documents compiled in 1885, it implies the advance of money made by the government to cultivators at the time of sowing and recovered at the time of reaping. The Royal Commission on Agriculture had justified it in these words, "In normal times, the village moneylender seems to have met the normal needs, but in times of severe drought or widespread calamity, his resources proved unequal to the strain upon them, and long before the British acquired control, the rulers of the day were accustomed to grant loans to the cultivators of soil".[18]

However, Taccavi loans are sanctioned for the following purposes:[19]

1. Purchase of seeds, manures, fertilisers and cattle,
2. Bunding and levelling of lands,
3. Undertaking soil conservation works,
4. Digging and repairing of wells,
5. Installations of pumpsets, persian wheels, etc,
6. Construction of irrigation channels,
7. Reclamation of waste lands,
8. Purchase of agricultural implements and machinery,
9. Adoption of improved agricultural practices,
10. Adoption of plant protection measures,
11. Establishment of orchards,
12. Purchase of fodder for cattle,
13. Maintenance of cultivators while

TABLE VII

Class-wise Distribution of Loans

(Rs in crores)

Class	1971-72	1972-73
A. Owner Cultivators		
Upto -- 1 Hectare	60.11	71.84
1 — 2 Hectares	100.42	144.35
2 — 4 Hectares	159.53	197.19
4 — 8 Hectares	141.46	183.06
8 — Above	107.57	127.59
B. Tenant Cultivators	15.83	16.30
C. Agricultural Labourers	4.78	8.97
D. Others	2.17	2.73
Total	614.52	776.09

engaged in sowing and tilling their lands, and

14. Undertaking rapairs and reconstruction of houses damaged by floods, etc.

Since the funds for taccavi loans are allotted from the budgetary resources of the state governments, more often than not the amount is inadequte and exiguous. The amount of Taccavi loans disbursed by the state governments under different plans, as shown in Table IX, was no doubt increasing in consecutive Plans, yet its size in total agricultural credit was as little as a mole to a hill. The limited provision in budgets is a deliberate act of the state governments because it is to be purveyed in times of abnormal conditions, and moreover, financing of agricultural activities of cultivators is not the business of the government.

stringent conditions

The cultivators are also not much keen to acquire such loans from the government, specially because the terms and conditions attached with Taccavi loans are stringent and complicated. In addition to this, "the disbursement arrangements are insufficient and involve incidental delays"[20]. It is no longer regarded as an important source of agricultural credit in the country.

TABLE IX

Taccavi Loans During Plans

(Rs in crores)

Plans	Amount
First	18.5
Second	41.0
Third	55.0
Fourth	62.5

Although the Venketappaih Committee suggested certain measures for the improvement of Taccavi loans system in the country, it ultimately advocated for the discontinuance of the system in these words, : "This should, however, be considered as a purely temporary and limited arrangement and a date should be fixed in each state beyond which no Taccavi should be provided except to meet situations of widespread distress such as floods and famines.[21] In spite of its immateriality the governments are neither inclined to discontiune the system nor interested in channelling the funds as advocated by the Gadgil Committee, 1944.

Commercial Banks : Prior to their nationalization, reluctance of commercial banks in providing loans for agricultural purposes was proverbial. In the post-nationalisation period, which synchronised with the period of the fourth five-year Plan envisaging heavy additional capital investment in agriculture, and in turn, entailing credit requirements of an order admittedly beyond the capacity of cooperative sector, commercial banks emerged on the rural scene by opening branches to cater for credit requirements. The government of India and the Reserve Bank have taken a number of measures to help them to expand their activities in financing of agriculture and also to eradicate the impediments experienced by them. Some of the important measures are[22] :

(a) Lead bank scheme and branch expansion,

(b) Guarantee for small loans,

(c) Guidelines for financing agriculture.

(d) Refinance from the Reserve Bank, and

(e) Differential rates of interest.

On the recommendations of the Study Group of the National Credit Council and the Nariman Committee, the Reserve Bank of India introduced the 'Lead Bank Scheme' according to which every district in the country was allotted to one or another scheduled commercial bank and was known as the lead bank of that district. The basic function of the lead bank is to measure the agricultural resources and potentialities and estimate the credit requirements including those of weaker sections and backward areas in the district. It is imperative not only for the efficient dispensation of credit but also for mobilization of resources. "The bank is required to act as the consortium leader and after identifying growth centres and areas suffering from credit gaps, it has to involve other banks operating it the same area in the programme of banking and economic development."[23]

When commercial banks are saddled with new and growing responsibilities of expanding agricultural credit and developing banking habits among the rural masses, geographical dispersal and expansion of branches are inevitable. However, this programme received a great impetus since the nationalization, as may be witnessed from table X. The remarkable growth in the number of bank offices altered the spatial pattern of distribution on account of 50.1 per cent increase in the number of rural offices, as against 20.4 and 29.5 per cent rise in the numbers of semi-urban and urban offices respectively. It appears that the average coverage of population per bank office, which was about 65,000 in 1969, is reduced to 25,000.

Following the recommendations of the working group appointed by the government of India under the chairmanship of S.S. Shiralkar to formulate a scheme to protect the interests of the banks for the risk involved in the

TABLE X

Centre-Wise Distribution of Commercial Bank Offices

Year	Rural	Semi-Urban	Urban	Total
Number at the end of June				
1969	1832	3322	3108	8162
1970	3062	3695	3374	10131
1971	4279	4016	3718	12013
1972	4814	4385	4423	13622
1973	5561	4723	5078	15362
1974	6175	5094	5667	16936

agricultural financing, Credit Guarantee Corporation of India Ltd, was established to pool their risks and cover them by a common and centralised guarantee scheme, which was formulated in April, 1971.

According to the scheme, the loans advanced to farmers and other priority sector ventures, was covered by the guarantee provided by the Corporation Formerly the loans amounting Rs 1000 for seasonal agricultural operations, and Rs5000 for capital expenditure were covered by the guarantee of the Corporation. A guarantee fee of one half of one per cent is charged on the amounts outstanding on account of eligible credit facilities.

Later on, in December 1971, the corporation liberalised its scheme by extending cover to a larger number of eligible borrowers and loans. Even the purposes covered under the scheme for agricultural credit were further extended including cultivation of crop and agricultural development schemes.

refinancing facility

In order to induce commercial banks to advance loans for agricultural purposes, the Reserve Bank of India has rendered refinancing facility, according to which the additional advances sanctioned by commercial banks for seasonal agricultural operations is refinanced by the bank. The policy of refinance, the contents of which are subject to change in accordance with agro-conditions obtaining in the country, has a salutary effect on augmenting the credit dispensation by commercial banks.

The suggestion for adoption of differential rates of interest especially when the income inequalities among the agricultural borrowers are glaring, was mooted by the government of India in the larger interests of weaker sections. Accordingly, the Reserve Bank of India appointed a committee which examined the question of differential rates and suggested the linkage of the scheme with the credit guarantee scheme for covering small loans by the borrowers of agricultural and other priority and neglected sectors. The committee recommended the range of rates varying from 8½ per cent to 10 per cent. The borrowers who are economically weak i.e. whose income does not exceed Rs 1200 if residing in rural area, or having agricultural land not exceeding one acre of irrigated or 2.5 acres of unirrigated, are made eligible for concessional rates of interest under the scheme. However, loans under the scheme are provided for working capital not more than Rs 500 and fixed capital upto Rs 2500. Such concession is an additive factor in popularizing the services of commercial banks in rural sectors.

state enactments

While entering the rural sector, commercial banks encountered the problems arising out of numerous state enactments relating to the rights of transferability through sale or mortgage, agricultural debt relief and regulation of money-lending, the imposition of land ceiling, land reforms, etc. To examine these problems and recommend measures for simplification of procedures and for improving the participation of commercial banks in agricultural development programmes, an expert group was appointed by the Reserve Bank of India under the chairmanship of Mr R.K. Talwar, in September, 1969. While submitting its report in December 1970, the commitee felt that in order to enable the commercial banks to "cater for the credit requirements of as large a number of agriculturists as possible, certain restrictive features of the various state enactments, particularly those relating to right of alienation in land or interest therein need be removed."[24]

The following is the summary of some of the important recommendations of the Talwar committee:

Cultivators who have no rights or have only restricted rights of alienation in their lands or interests—such as landholders belonging to scheduled castes/tribes, backward classes/castes, tenent-cultivators, fragment holders, allottees of Bhoodan land and of government land — should be vested with rights to alienate land/interests in land held by them in favour of banks for the perpose of obtaining loans for agricultural purposes.

general principle

The general principle of priority as between institutional credit agencies in regard to loans based on common security, should be as adumbrated in the Transfer of Property Act, 1882. This will ensure that the concept of first charge in favour co-operatives does not adversely affect commercial banks. However, all institutional agencies should have priority of charge vis-a-vis private credit agencies.

To overcome the prolonged delays involved in securing registration of mortgages created in favour of commercial banks, it is necessary to provide that it would be sufficient if a copy of the mortgage deed is sent for registration to the sub-registrar. The mortgage so created should also be noted in the record of rights.

To facilitate prompt recovery of dues of commercial banks without having resort to protracted and time consuming litigation in civil courts, the state governments should empower an official with authority to issue an order, having the force of a decree of a civil court, for payment of any sum due to a bank by sale of the property charged/mortgaged in favour of the bank.

Cultivators borrowing from commercial banks should be exempted from payment of stamp duty, registration fee and charge for issue of non-encumbrance certificate to the extent to which

they are eligible for these concessions if they borrow from cooperatives.

In addition to these and several other recommendations, the committee took great pains in modelling a bill, namely The Agricultural Credit Operations and Miscellaneous Provisions (Banks) Bill, 1970 to incorporate some of the provisions recommended in the main report. Some of these recommendations were incorporated in the state enactments.

Removal of some legislative barriers, provision of substantial financial resources together with concessions have finally accelerated the pace of credit dispensation by commercial banks. The performance of commercial banks in farm financing can be judged with reference to the flow of bank credit in agricultural sector and the pattern of advances. It is evident from Table XI, that their total advances during the post-nationalisation period swelled from Rs 162.20 crores in 1969 to Rs 585.68 crores in 1974 registering three and a half times rise over 1969. Progress in performance is really laudable if viewed in the light of legislative impediments, administrative inexperience and growing competition with credit societies and private money lending business in rural and farm sector. However, relative share of agricultural advances to aggregate bank advances evinces a spurt in the year following nationalization and a slow but steady rise in subsequent years.

direct financing

Expansion in direct finance recorded a phenomenal rise in contrast to indirect finance. "After nationalisation, commerciai banks made excellent progress in providing direct finance to cultivators.[25] Formerly, prior to nationalization banks gave loans, mostly in the form of indirect finance. In this context, Singh and George reported that about 33.50 per cent of the loans were given to state electricity boards and about 28.56 per cent had gone to finance processing and marketing indicating banks' preference for safe and secure investments.[26]

Grant of advances to farmers at such a scale is certainly an indication of their preference to commercial banks. While studying the effectiveness of commercial banks, C. Dinesh[27] concluded: "The farmers were going to commercial banks mainly due to quick and personalised services rendered by the bank. Besides, good banking facilities provided by the commercial bank was another attraction. Thirdly, each borrower was dealt with on the merit of the case which was not being done by the cooperatives." Thus, public sector banks have been playing a leading and effective role in credit dispensation to the agricultural sector.

small man ignored

Despite the remarkable extension in agricultural loans in yester years, the institutions whether cooperative societies or commercial banks, more often than not, have ignored the small and marginal farmers due to the security-oriented loaning policies of the former. It is admittedly recognised that "under the present lending system where the viability of the farm and repayment capacity are the main criteria of creditworthiness, there is the danger of the small farmer being bypassed by the credit inatitutions, unless special steps are taken.[28] In this context, the All-India Rural Credit Review Committee being quite conscious of their problems recommended the establishment of separate agencies for rehabilitation of small and marginal farmers including agricultural labourers.

marginal farmers

Following the recommendations of the committee, the government of India set up Small Farmers Development Agency (SFDA) and Marginal Farmers and Agricultural Labourers (MFAL) agency for identifying their problems and providing financial assistance for their economic betterment. Under the scheme 46 SFDA projects and 41 MFAL projects were sponsored covering 54 districts mostly belonging to backward regions. About 50,000 and 20,000 families are expected to come under the fold of SFDA and MFAL respectively. However, by the end of 1974 both the schemes had inclusively identified 30.25 lakhs and 14.04 lakhs of small and marginal farmers together with agricultural labourers. These identified farmers and workers have been brought under the cooperative fold and have been granted financial assistance through loans and advances, by cooperative societies and commercial banks. Substantial cooperative loans are obtained by these agencies as may be witnessed from

TABLE XI

Advances by Public Sector Banks (Rs. in crores)

Year	Direct Finance	Indirect Finance	Total	Aggregate Advances	Per cent Col (4) to Col (5)
1	2	3	4	5	6
At the end of June					
1969	40.20	122.09	162.20	3016.76	5.5
1970	160 38	141.26	301.64	3577.60	8.2
1971	206.37	134.59	340.96	4079.76	8.1
1972	231.89	156.58	388.47	4622.00	8.4
1973	297.86	170.83	468.69	5430.00	8.6
1974	391.58	194.10	585.68	6563.00	8.9

Table XII because they are more akin to the cooperative field.

During the period of three years, i. e. from 1972-73 to 1974-75, loans from cooperative societies increased from Rs 54.05 crores to Rs 87.16 crores recording the increment of about 61.3 per cent. As against this, percentage rise in loans from commercial banks comes to 268.7 per cent, indicating their growing inclination towards bank loans. Undoubtedly, the prevailing institutional credit structure is quite responsive towards the problems of small farmers and agricultural workers but what is needed is that they should induce these weaker sections in adopting modern technology and improved practices. Thus, "SFDA and MFAL are basically micro-level development programmes with credit serving as a catalyst."[29]

new orientation

In the regional seminar for Asia on Agricultural Credit for Small Farmers held in Bangkok, in October, 1974, it was expressed that it may be often desirable to give a new orientation to the existing institutions under the pressing social and economic needs, through appropriate policy changes."[30] But multi-agency approach, if it is well integrated with the total system of credit, will be potentially an important means of carrying out sound rural credit policy. In this light the government of India, promulgated an ordinance on September 26, 1975 to establish the regional rural banks in the country. In its preamble, it is stated that "with a view to developing the rural economy by providing, for the purpose of development of agriculture, trade, commerce, industry and other productive activities in the rural areas, credit and other facilities, particularly to the small and marginal farmers, agricultural labourers, artisans, and small entrepreneurs the regional banks are to be established.

According to section 3(2) of the ordinance, a regional rural bank will be a separate corporate body which will be sponsored by any other bank in the country. The sponsored bank is required to contribute share capital and should provide the facilities for recruitment and training to those regional banks. Although the authorised capital of the bank is stipulated to be Rs 1 crore the issued capital for each regional bank will be only Rs 25 lakhs, which will be subscribed in the following manner:

1. Central government	50 per cent
2. State government	15 per cent
3. Sponsored bank	35 per cent

The authority of increasing the issued share capital without altering the above proportion is vested in a board of directors, which is responsible for general superintendence, direction and management of the affairs and the business of a regional bank and is consisting of the chairman and other members representing the agencies as below:

1. Central government	3
2. State government	2
3. Sponsoring bank	3

The ordinance has clearly spelt out the business to be transacted by the regional bank vide section 18(2), namely

(a) the granting of loans and advances particularly to small farmers and marginal farmers as well as to agricultural labourers and other agricultural cooperative societies; and

(b) the granting of loans to artisans and entrepreneurs and persons engaged in trade of small in size, within the notified area.

This ordinance was replaced by an Act, of Parliament, Regional Rural Banks Act 1976 (No. 21 of 1976). Upto March 12, 1976, eleven RRBs have been set up in various states. Thus, the government has added a new dimension to rural credit which is a propitious move in the circumstances when the private agencies have been made defunct and there is no other means for farmers to secure credit.

In a nutshell, the system of rural credit has undergone radical changes since the nationalisation of commercial banks which subsequently started participating in agricultural lending, as a result of which individual money-lending agencies began to disappear from the rural scene. Establishment of SFDAs and MFALs, amalgamation of primary agricultural credit cooperative societies, reconstitution of primary land mortgage/development banks, lead bank scheme, etc, and the recent measures under 20-point economic

TABLE XII

Borrowings of SFDAs and MFALs (Rs. in crores)

Type of Borrowings	1972-73	1973-74	1974-75
A From Cooperatives			
i. Short Term	29.62	16.83	21.57
ii. Medium Term	6.38	10.20	22.10
iii. Long Term	18.05	15.00	43.49
Total	54.05	42.03	87.16
B. From Commercial Banks			
i. Short Term	1.73	1.52	2.69
ii. Term Loans	3.06	8.75	15.00
Total	4.79	10.27	17.69
Grand Total	58.84	52.30	104.85

programme will, by all means, help bridge the abysmal gap existing between supply and demand of credit which is mounting every year on account of improved technology and mechanisation of agriculture. If all the agencies keep up the same zeal and zest, there is no reason why the credit needs amounting to Rs 5000 crores during the fifth Plan will not be catered for by these institutions.

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The other energy crisis

Erik P. Eckholm

For the silent majority in the world the real energy crisis is not the high price of oil but the acute shortage of firewood. Erik P. Eckholm reports on the forgotten fuel crisis which now afflicts a third of the world's people and which could become the major ecological disaster of the century. Erik P. Eckholm is a researcher with the Worldwatch Institute in Washington D.C. and the material for this feature is drawn from his book "LOSING GROUND" (W.W. Norton and Co., 1976).

A LONG line of people, bent double under the heavy weight of firewood stacked on their backs, toiled down the road to Kathmandu. A rough harness of sacking stopped their backs being rubbed raw by the swaying bundles. "How much will they get for the wood?" I asked my taxi-driver. "Oh, firewood. A very expensive item," he exclaimed in a tone of a man explaining the obvious to the uninitiatied. "A load like that will sell for 20 rupee in town this morning. Two years ago, you could buy it for only six or seven rupees."

The line of people, men, women, children and even the very old, continued on towards the Nepalese capital.

firewood shortage

This scene set against the backcloth of Mount Everest, is a glimpse of a larger drama now being enacted on a stage spanning three continents by a cast of millions in the developing world. It is the other energy crisis—the firewood shortage.

One third of the world—more than a billion people in Africa, Asia and Latin America—still depend on firewood for cooking their food and heating their homes. And as their population has risen, the trees have fallen, and firewood has become desperately scarce. For some villages here in the once heavily forested foothills of Nepal, the job of collecting firewood has changed from being the chore of an hour or two to the labour of a day. In Upper Volta, West Africa, all the trees within a 70 kilometre radius of the capital city have been consumed for fuel.

treeless landscape

In Bolivia and Peru, the slopes of the Andean valleys are nearly treeless. In the Philippines, over half the forests have been destroyed in the last fifty years alone. In northern Nigeria, the citizens of Kano are consuming 100,000 tons of firewood a year and three-quarters of it is coming from the area within 20 kilometres of the town itself. In India, firewood scarcity is so acute that special guard-squads and mobile courts have been set up to combat 'tree-poaching' in legally protected areas. And farmers who once allowed their landless labourers to collect wood free from their land are now cutting the trees for themselves and trucking it to the nearest town for sale. Even in China, young trees on commune plantations are sometimes uprooted to cook a meal.

For people who already live on the poverty line, this fuel crisis does not mean leaving the car in the garage on Sundays or turning down the central heating a few degrees.

Firewood is a basic need. And paying more to buy it or travelling further to get it means cutting down on other basic needs such as food or clothes and having less time and money left over to invest in a better future.

In Niamey, Niger, deep in drought-stricken Sahel, the average manual labourer's family is now spending one quarter of its income on wood. In Upper Volta, the fraction is often nearer a third.

Those who cannot afford to pay the price have to trek into the surrounding countryside--often a day's journey on foot—to find the wood. More often, they scour the villages and cities for garbage or anything else that will burn. When I visited the Chief Conservator in Pakistan's North West Frontier Province, he told me that he had got out of his car the previous evening to stop a woman from peeling the bark off a roadside tree. "I told her that it was like peeling the skin off a man" he said. "Of course she stopped—intimidated by what was probably the most personal encounter she will ever have with such a senior official. But no doubt she carried on when I drove off. For what else could she do?"

indiscriminate use

Half of all the trees cut down in the world every day are being used for the age-old purpose of cooking and heating. The other half are being destroyed mainly by the overgrazing of animals and the 'slash and burn' techniques of shifting cultivation. Forests are being felled to make way for peasant farmers

and cash-crop plantations in West Africa; for new roads and airstrips in Brazil; for expanding urban areas in Nigeria; for charcoal-making in Kenya, Tanzania and Somalia; for timber exports in Indonesia.

Trees are a renewable resource when forests are carefully harvested and replanted—but instead they are being exploited as if there were no tomorrow.

The first casualty of this war on the world's trees is the soil. Trees preserve the soil's stability and fertility, retaining moisture and preventing erosion by wind and water. Do away with the trees and the cycle is thrown into reverse. The land becomes barren and brittle. The precious top-soil starts blowing in the wind and swirling away in the rains. Water begins to run off the hard denuded landscape rather than soaking in. The predictable drought sets in and a man-made desert is the result. This is what happened in the Dust Bowl Years in the Great Plains of the United States in the 1930s, and this is what is now happening, for example, around the huge Rajasthan desert in north west India, in the mountain valleys and almost treeless plains of central and southern America, and in the semi-arid regions of Sahelian Africa. In the Sahara, the retreat of the tree and the destruction of vegetation by over-grazing is allowing the desert to advance southwards bringing with it drought and famine.

soil erosion

In the last hundred years, water and wind erosion have destroyed an estimated 5,000 million acres of soil—the equivalent of one quarter of the earth's farmlands.

Soil is suffering in quality, as well as in quantity, because of the firewood crisis. In India, Pakistan, the Sahel, Egypt, Ethiopia, Iraq, Bolivia and Peru, the firewood shortage is forcing millions of poor families to use dried animal dung for fuel instead of using it to fertilise the land. It is a short-term necessity but a long-term disaster. For animal dung provides an essential plant nutrient. And the 300-400 million tons of dung now being burned as fuel in India alone is equal to one third of the country's fertiliser use. Prehaps even more important, the dung preserves the soils quality and structure. Without it, the land is even more prone to erosion and drought.

The whole length of the Himalayan foothills, from Afghanistan in the west to North Pakistan, India, and Nepal and Burma in the east, is now in the grip of this pincer movement—as the soil suffers both from dung-burning and from tree-felling.

silt formation

The next casualties are the irrigation and water-works. The soil washed off the unprotected hillsides is relocated as silt in Asia's rivers, affecting marine life and fisheries, clogging up expensive reservoirs and blocking vital irrigation systems. The silt inevitably reduces the carrying capacity of the rivers and increases their propensity to flood their banks.

At a time when every acre of cultivateable land is precious, the firewood crisis is leadidg to the impoverishment of vast areas of land and to increases in drought and floods.

Finally, there are the forgotton casualties of the forests. The natural habitat of many birds, animals and insects is being destroyed and the natural migration of the forest creatures is being interrupted.

Already, over 1000 species of wild life are threatened with extinction—and the forests are home to many of them. Much still remains to be learned about the complex and delicate ecosystems of the forests. We do not know what we are destroying or what the consequences may be. But we do know that the very air we breathe is dependent on the world's vegetation, including trees. A single hectare of woodland takes 3.7 metric tones of carbon dioxide out of the atmosphere and returns two metric tons of oxygen each year. Massive deforestation may affect the atmosphere and climate of the planet. At the moment, both these issues are being studied by experts at the World Meteorological Organisation in Geneva.

What can be done to halt the trend? Mass tree-planting is an obvious but not an easy answer. The sheer scale of such an operation, the difficulty of protecting newly planted trees from forraging animals, tree-poaching and those with an immediate and desperate need for firewood, all combine to make reforestation easier said than done. There is also a political reality to contend with. Governments, hard pressed by other priorities, are not eager to initiate programmes which will take decades to bear fruit in the form of either leaves or votes.

Side by side with re-planting schemes, alternative fuels are also urgently needed to take the pressure off poor people struggling to find firewood and, in so doing, to also take the strain off the forests. The main hope—kerosene—withered with the increase in oil prices.

alternate fuel

At the moment nothing could solve the problem more quickly than a cheap device for cooking the evening meal with solar energy collected during the day. But the technical problems of cheap heat storage are formidable. Little research and investment is being attracted to such a humble project.

Indian scientists have been experimenting for over ten years with a bio-gas device which breaks down manures and other organic wastes to release methane gas which can be used for cooking whilst leaving behind a rich compost for the farm land. Over 8,000 of these 'bio-gas' plants are now in use in India. But without a substantial reduction in cost and technical complexity, they will only slowly infiltrate the half million villages of that subcontinent. A tiny fraction of the re-

search now devoted to armaments could almost certainly help make the vital breakthrough and enable solar stoves and bio-gas cookers, or combinations of the two, to be made cheaply and locally.

The United Nations Environment Programme is working on this problem. Trials with combinations of three alternative sources of energy — solar, wind and bio-gas—are now underway with UNEP help. In 1977, UNEP will also hold a World Conference on Desertification. Shifting cultivation, over-grazing, and the cutting of trees for fuel have been identified as driving forces behind the alarming advance of deserts and will be high on the conference agenda.

Planting and protecting new trees and finding alternative fuels is essential to take the strain off people, trees, soils and water systems. The march of deforestation has to be halted if a serious ecological disaster, affecting the lives and livelihoods of people, is to be averted.

Expanding economic horizons for India and Iran

Raj Narain Gupta

Mr Raj Narain is the author of "Iran—An Economic Study" which earned him an 'Order of Recognition' and a 'Gold Medal', from the Iranian government in 1950. In this article, he has listed the areas in which, in his view, collaboration between the two countries can be fruitfully executed in the next few years.

THERE ARE hardly peoples of two countries in the world today, said Jawaharlal Nehru in his well-known book 'Discovery of India', who, both in their origin and subsequent peaceful cultural intercourse, have been so close to each other as India and Iran. The relations between them precede even the beginnings of the Indo-Aryan civilization. And yet, if history has proved anything it is this that one can no more depend on past cultural, racial or religious bonds for continued and developing friendship between any two countries. Each country produces entirely new situations and each generation must forge its bonds afresh, specially in the fields of trade and commerce, technological exchanges and industrial collaborations. These are the new bonds that bind countries in closer friendship, for mutual benefit, than episodes of long common history and culture.

There is no doubt, therefore, that in the recent mutual exchange of visits between the high political dignitaries of the two countries, including their prime ministers, utmost stress has been laid on the development of closer economic contacts, expanding trade relations and negotiation of joint ventures. Viewed in this context the significance of the recent visit of Mr Fakhruddin Ali Ahmed, our president, to Iran becomes quite obvious. While fulsome references to India and Iran's ancient historical and cultural relations were made in welcome speeches and official banquets, the hard core negotiations between their accredited representatives are now invariably confined to more mundane matters of trade and commerce and economic and technological collaborations.

That India and Iran are the two rising and economically invincible nations in the Third World is a fact which is obvious to any discerning eye. The progress made by India, since independence, specially during the last decade, despite unprecedented challenges and strains posed by the 'partition' of the country, communal holocausts, recurrent droughts, wars with China and Pakistan and fight against vested interests has confounded even the worst critics of this country. From an exporter of raw materials and importer of all kinds of manufactured goods, even sewing needles and oil pins, the country now produces the most sophisticated electronic equipment, computers and calculators, aeroplanes and modern ships, engineering goods and basic chemicals, atomic, radar and defence equipment, railway locomotives and massive power stations, machines and precision tools and consumer goods of every description. And, all these results have been achieved within the democratic framework of an enlightened constitution, coupled with a social and economic revolution under which the underprivileged and backward sections of the community, are receiving much favoured treatment to bring them at par with the rest of the people.

Imports & Exports from India to Iran (In Rs. Crores)

Year	*Imports*	*Exports*
1961-62	74·6	7·0
1965-66	53·7	9·4
1970-71	91·6	26·7
1971-72	126·4	19·8
1972-73	121·4	24·8
1973-74	267·6	42·7
1974-75	472·6	210·0
1975-76 (first six months)	211·8	145·6

Under the inspiring, enlightened and dedicated leadership of His Imperial Majesty, Mohammed Reza Pahlavi, the Shahanshah of Iran, a similar socio-economic revolution is taking place in that country. This revolution also aims at doing away with feudalism and introducing an egalitarian social order. An

obvious advantage which Iran enjoys over India consists in her phenomenal reserves of oil, the liquid gold, which now, after the four-fold increase in prices, yields her revenue of over 100,000 million dollars per annum. Iran desires a rational deployment of these resources for internal development, raising the standard of living of her people, gaining strategic strength and helping the economies of developing countries with a view to creating a peace zone in the Indian ocean, free from the rivalries of big powers, and wedded to economic unity.

serious problems

The translation of these goals into action, in the face of trained manpower bottleneck, managerial inexperience, technological inadequacy and the desire to achieve spectacular results within the shortest possible time, pose serious problems. The Shah, therefore, desires that India with her vast trained manpower and rich industrial infrastructure, may come to Iran's aid and help it in carrying out her ambitious development programmes. Iran is also taking the help of other developed countries such as the USA, the USSR, W. Germany, Japan and France in the implementation of her development plans, but, she feels that, any help from India is more welcome because of her non-aligned status and the availability of her skilled and professional manpower at much lesser cost.

Iranian and Indian needs appear therefore to be complementary. Iran possess superior financial resources, while India has trained engineers, qualified technocrats and advanced technology. It is for this reason that the two countries find it of mutual advantage to enter into treaties of trade and commerce, exchange of technical personnel, training facilities, industrial collaborations, joint ventures and economic understanding. Mutual economic interests are thus further cementing the traditional bonds of friendship and goodwill that have subsisted between the two nations since time immemorial.

Though archaeological excavations in eastern and western Iran (Sistan, Makra, Elam, Fars etc) and India (Valley of Indus, Sutlaj and Saraswati) have revealed the existence of considerable trade between the two countries in ancient times, the fact remains that it was largely confined to a few items consumed by the elite such as gold, pearls, textiles, spices, scents, objects of art and luxury goods. In recent years both the range and value of items exchanged between the two countries have greatly increased.

India now exports to Iran, not only traditional items such as cotton and jute manufacturers, tea, sugar and spices, but non-traditional items such as iron and steel, cement, non-ferrous metals, vehicles, transport equipment, engineering goods, cycles, tubes and tyres, electrical cables, lamps, motors, hardware, chemicals, toilets, paper, electrical goods, crockery, stationery, sewing machines, fishing boats, engineering goods, basmati rice and light machinery. In return India imports from Iran mineral oil (about 80 per cent of total trade), carpets, rugs, skins, furs, fruits, nuts, gums, resins, drigs and spices etc.

The value and volume of both exports and imports has been going up over the years. Till about the sixties, the value of India's exports to Iran amounted only to about Rs 60 million and imports to about Rs 400 million. During the last few years, these have increased many-fold. India's exports to Iran in 1974-75 amounted to Rs 2100 million and imports to Rs 5000 million. The two countries extend to each other the 'Most Favoured Nation' treatment. In fact, the prime minister of Iran, Mr Amir Abbas Hoveyda, who visited India in May last said, 'Sky is the limit for the development of trade between the two countries'.

At present India's share in Iran's total imports amounts to only about two per cent. It can go up many-fold provided we can assure quality of our products and stick to delivery schedules. The vast added oil revenues have created a massive demand for all kinds of capital goods, intermediate raw materials and consumer goods in Iran, particularly goods needed for the industrial infrastructure such as transmission equipment, material handling equipment, rubber products, synthetic materials, building hardware and the like. The list is formidable, provided Indian businessmen can compete in quality and business dealings with European competitors and Japan. The prospects for further development of trade are, therefore, highly propitious.

Already India and Iran are collaborating with each other in a number of joint projects such as the Madras Oil Refinery and fertiliser plant, the Irano-Hind Shipping Co., the working of the 7.5 million-tonne Kudermukh iron ore project in Karnataka and the 300,000 tonne annual capacity alumina plant in Gujarat. Some joint industries have also been set up by private Indian entrepre-

IRAN—Some Basic Facts

Area	:	1648 Thousand Square Kilometres
Population	:	31 million
Density (No. of persons per Sq. Km.)	:	19
Annual rate of increase in population (1958-65)	:	2·5 per cent
Growth Rate in G.N.P. in 1974-75	:	40 per cent at constant prices
Estimated per capita National Income in 1974-75	:	1000 dollars per annum
Estimated per capita National Income in 1977-78 (end of Fifth Plan)	:	1500 dollars per annum
Target for G.N.P. per capita at the end of Sixth Plan (1978-83)	:	2300 dollars per annum
Income from Oil in 1974-75	:	15,000 million dollars
Expected income from Oil in 1978	:	102,000 million dollars

neurs in Iran such as those for the manufacture of trailers, cycles, hose pipes, electric motors and transformers, automotive parts and non-ferrous metals etc.

As a result of the recent visit of our president to Iran and of Iranian prime minister to India it is hoped that plans for collaboration in the setting-up of a large number of petro-chemical, fertiliser, iron and steel, machine-building and engineering goods industries, etc., the negotiations for which are already in advanced stages, will be finalised, and the economic collaboration between the two countries will achieve new dimensions.

One important field in which the two countries can benefit from each other's collaboration relates to the oil industry. India's requirements of mineral oil, which have remained almost static during the last two years because of the hefty increase in prices but are likely to go up by about 10 per cent annually due to economic compulsions, may amount to about 24 million tonnes in the current year. Of this India produces at present about 8.5 million tonnes (excluding the promising supply from Bombay High). For the rest of her supply, India has to depend largely on middle east oil. Iran, one of the most important producers of oil, and an invaluable friend of India can enter into a long-term agreement with India for an assured supply of this material at concessional rates and easy terms of payment.

The detailed negotiations on oil and other trade aspects may take some time to fructify, but it is hoped our president's visit to Iran would have opened up a new chapter in the direction of expanding new horizons on the economic front.

Seychelles is a republic

K.S. Ramanujam

On June 29, 1976 was born a new independent republic—Seychelles an archipelago of about 90 islands in the Indian Ocean—the total population of which is mere 60,000. K. S. Ramanujam, our representative in Madras, describes his experiences during a recent visit to the islands.

IT WAS my unexpected privilege to spend 30 hours in the lovely Mahe island where most of the 60,000 *Seychellois* live. This happened only last month, on June 12 and 13, when I was returning to India from Nairobi after a six-week tour of South Africa. Many facts about Seychelles are not widely known, especially in our country where, until now, there has been very little or no publicity for this lovely spot.

First, these islands are of incomparable beauty. Archbishop Makarios of Cyprus, who had to spend one year in exile on the main island of Mahe in Seychelles wrote, "I have visited many places all over the world and it is no exaggeration to say that the Seychelles islands contain the most beautiful places in the world". The famous writer and author Ian Fleming wrote: "It is a real paradise".. Many others have described in similar endearing terms these lovely islands, claimed to be the only mid-ocean islands in the world of a granitic origin.

Recorded history of human civilisation in these islands is hardly two centuries old. Seychelles were first a French colony and since 1815, a British colony, dependent on Mauritius. This ended in 1903 when it became a crown colony — independent of Mauritius. In that year the population of these islands was a mere 20,000. It is indeed quite surprising that even after 73 years their population today is only 60,000.

Until 1972, when an all-weather international airport was built at Mahe by means of reclaiming the bay adjoining it, the Seychelles were not within easy reach. The nearest mainland harbour for Seychelles is Mombasa, 1000 miles away. Even Mauritius is 1,200 miles and Bombay and Colombo are about 2000 miles from Seychelles.

It was rightly described as a tourist paradise by leaders in hotel industry as well as international airlines throughout the world. Already, within four years after the commissioning of the international airport, 30 jets fly into Mahe every week and the number is fast increasing. Jumbos will begin landing within a few days and our Air India has also decided to operate a weekly service from the June 25, 1976.

limitless scope

Mr James Mancham who became the prime minister of Seychelles in 1974 after his party "Seychelles Democratic Party" registered a massive victory of 13 out of 15 seats in the legislative assembly as a result of elections held under adult sufferage, lead his party to victory on the issue of Independence. His party's other main contention was that entrepreneurs from all over the world should be offered facilities to develop the hotel industry and fishing industry for which the scope seems limitless. When a government was to be formed, the opposition party lead by Mr Albert Rene agreed to co-operate and joined the ministry. When on June 28, 1976, the Seychelles became a full-fledged independent

republic with equal status in the comity of nations, its future will entirely depend on the wisdom of its own leaders to take it along the paths of progress, prosperity and happiness.

Mr James Mancham has already established himself as the undisputed leader of this lovely little country. Realising from the outset that Seychelles would be ripe for both political and commercial exploitation, Mr Mancham has lead the islands into the twentieth century on his own terms. He has shown his great abilities in many parts of the wide-world as a tireless promoter of his islands abroad...always remembering, however, that Seychelles belongs to its people — and not to outside interests or to the aspirations of a few educated Seychellois seeking political and social power. He is well aware of the hard fact that the Seychellois are an easy-going people. For quite some time he has been giving slogans like "Paint up, fix up, clean up and green up to keep Seychelles beautiful" and as a result the important areas of Victoria Town which is the capital of Seychelles and Cascade have acquired a new look. He is determined to see that at least 1,20,000 foreign tourists land in Seychelles by 1980 as against only 55,000 at present.

clear-cut policy

"Keep out of our politics" — has been James Mancham's call to foreigners for quite some time as he wants to steer clear of outside influences and interference in Seychelles affairs. He does not propose to have any defence machinery as he feels it is not warranted. Seychelles has a tidy police force which maintain the law and order with great tact and understanding. There are already two radio stations in the islands, one belonging to the government and the other to the Christain movement for their broadcasts to the east. With French collaboration, a colour television station will soon be in operation on this island.

There are only about one hundred families of Indian origin. most of the Seychellois are of mixed origin — Africans, English, French, Spanish, Chinese etc and their colour is light brown. The official language is English but the spoken tongue is Creole, a blend of French and Spanish. Mr Camery Chetty—a Seychellois of Indian origin — is the island's Finance minister and this indicates the respectable and responsible place occupied by them in this small resurgent nation. There is only one daily published by the government in tabloid size and it is said to be the smallest daily newspaper in the entire world.

main crops

The main crops of this island are copra—dried coconut kernels (50 per cent) and Cinnamon (30 per cent), vanilla, patchouli, guano, salted fish sharing the remaining 20 per cent. Owners of estates and Indian merchants control 90 per cent trade and it is commonly said that the secret of the Indian shopkeepers' success is his ability to give indefinite credit together with unfailing courtesy. Nearly everyone in the island is in his debt. It is a tax haven with the highest income-tax at 35 per cent.

Almost everything has to be imported. The 1975 import bill was about Rs 18 crores. As against this, tourism brought in Rs 9 crores and exports brought in Rs 3 crores. Seychelles has always enjoyed the status of a grant-in-aid colony and its trade deficits are taken care of by the British government so that it may continue to be a free economy. Britain has agreed to keep this arrangement going for the next five years so that Seychelles may be able to build up its economy on its own in this period. British goods attract import duty of 17 per cent and all others 20 per cent.

The birth-rate is three per cent per annum. Family planning is being introduced so that population increase may be arrested. As many as 20,000 out of the total population of 60,000 constitute the working force, and a good many of them are women. There are 6000 motor vehicles on the main Mahe island which is only 54 square miles. Its average temperature throughout the year is only 80/85 F° and the annual rainfall averages 90 inches. Its tallest peak is 3,200 feet high and even tea is grown on 40 acres. White as well as coloured workers get Rs 700 to Rs 900 per month; there is hardly any unemployment. Everyone here has a British passport at present although this will now change.

tourist facilities

Offshore banking with numbered account facilities will soon be in operation in Mahe. An Arab millionnaire is going to build a fabulous casino and hotel. Oberoi Sheraton have plans to build a very attractive hotel.

Beer flows like water on this island. People here start the day with beer and end it with beer. Seychellois are a jolly, simple, take-it-easy, care-free happy-go-lucky, cheerful people and freedom from foreign yoke may open up limitless opportunities for every one. Air Mahe is already an efficient air service taking tourists to its many attractive islands like the Bird island and others. The Seychelles is surely poised for a great future.

Attention Subscribers

All subscribers are requested to notify the non-receipt of a particular issue within a month of the date of publication failing which it may not be possible to provide replacement copy.

Manager

Airlines of the world—I

Lufthansa is fifty

S. P. Chopra

RECAPITULATING THE history of Lufthansa, Dr Herbert Culmann, chairman, executive board, Deutsche Lufthansa AG, said early this year: "The 50 years from 1926 to 1976 were one of breathtaking development in civil aviation in which Lufthansa was not only involved, but in which it played a significant role."

And the history of Lufthansa does read like a fairy tale. The first Lufthansa — Deutsche Luft Hansa AG, to be precise — began scheduled passenger, freight and air-mail traffic on April 6, 1926. Those were the days when radio technology and air traffic control were in their infancy. Night flying was considered a hazard. Not much knowledge or experience was available for bad weather flying. But the daring pilots of Lufthansa who were pioneers in this field, took courage in both hands and not only braved foul weather but conquered the unknown mountain ranges of the Alps, the Pyrenees and the Balkans.

By any standard, the very first year recorded remarkable success. With a staff of 1,527 in 1926, the Lufthansa planes flew 6.5 million kilometres, transported 56,268 passengers and 946 tonnes of mail and freight. With the planes of those days, the distance between Berlin and Moscow was covered in 15 hours. And it was no mean achievement!

The Lufthansa of 1976 is one of the leading airlines of the world, using fast, modern jet planes such as DC-10, Boeings 707, 727, 737, 747 and the Airbus A-300B. Boeing 737's are used for short-range, Boeing 727's for medium range, and Boeing 707's and 747's, as well as McDonnell-Douglas' DC-10's for long-range flights. The B-747 is a wide-body jet with a seating capacity of 365: its sister plane the BO747F has a cargo capacity of 100 tons and is used for clearing voluminous cargo.

Lufthansa's latest acquisitions, the long range DC-10 and the short to medium haul A300B "Airbus" fit logically into the carriers former all-Boeing fleet. By adding the new and quiet wide-body models to its inventory, the airline not only carries more passengers with fewer aircraft movements, but is also taking great strides towards eliminating excess noise and air pollution. In 1975, Lufthansa carried 10,147,900 passengers and transported 296,565 tonnes of cargo and mail. While it is rightly proud of its past achievements, Lufthansa is looking forward to a continued increase in its operations during the next decade. With a punctuality rate of 98 per cent, the airline is one of the few companies which have earned world-wide recognition for almost clock-like efficiency.

The jet age has made the world small. Lufthansa no longer considers Europe as a continent. It asks the people to think of Europe as a city. With Frankfurt airport as the geographic centre of Europe, each one of the major European capitals can be reached within approximately two hours. That is usually the time taken to travel from one part of a capital to another in most of the big cities, mainly due to traffic congestion. Frankfurt, the home port of Lufthansa, offers no less than 200 flights every day to all parts of Europe — and around the world.

In terms of financing and marketing accomplishments, the German national carrier can be proud of its achievements as well. The world economy was passing through a recession in 1975 and turnover of all businesses including airlines was adversely affected, Lufthansa was able to announce an increase of seven per cent in net profits as compared to 1974 with a gross turnover of 12 per cent. In addition the airline set a record by carrying more than 10 million passengers in the same year.

The profit motive has prevailed with Lufthansa all these years and it is not ashamed of it. Since the airline is not subsidized by the Federal German government, it has no option but to generate additional resources through efficient se vices and operation. It has to compete with airlines that are interested only in increasing their share in passenger traffic. These airlines are keen to transport as many passengers as possible into their own countries which results in the inflow of valuable

foreign exchange through expanded tourism. The governments of these airlines who support them, consider them successful even if their balance sheets show losses, because what is lost by these airlines is more than made up by tourism. But Lufthansa, as stated earlier, is in a class apart. It continues to get increasing shares in the expanding passenger traffic of the world, and also shows surplus in the financing results — a hall-mark of good business, efficiency and discipline.

The flying crane - the symbol of Lufthansa — has earned both fame and prestige, thanks to the millions of hours of dedicated work by its staff, both in the air and on the ground. The administration building at Cologne which overlooks both the Rhine and the renowned cathedral, is Lufthansa's Head Office from where all progressive impulses, which have made Lufthansa one of the foremost airlines of the world, emanate.

Nearer home, not many have forgotten the congestion of freight at Palam airport in the months of May and June 1976. Lufthansa operated its Jumbo B-747F to carry as much as 78 tonnes of freight on June 1, consisting mainly of textiles and handicrafts. Earlier in May the airline had operated 14 special cargo flights carrying 313 tonnes. And in view of the government of India's policy of encouraging exports, Lufthansa has prepared itself to lift increasing volumes of cargo in the coming months.

On the basis of extensive market research, Lufthansa has taken certain lessons to heart. The busy businessman, for example, is keen to reach his destination with the least delay. Too many stoppages are not only irksome; they may also contribute to unforeseen delays beyond the control of an airline. Hence the introduction of non-stop services. For a passenger who boards Lufthansa at Palam, Frankfurt is only 8 1/2 hours away with no stop between the two cities. The Indian Railways take more time for a journey between Delhi and Amritsar.

Lufthansa is a living airline — one which keeps its eyes and ears open and gets the best market researchers to forecast trends in various fields. While many airlines take a gloomy view of things till 1980. Lufthansa is optimistic. Its executives, whose job it is to maintain a calm, sober view towards future developments, dismiss the peddlers of doom. In their view the future will be neither startling nor even surprising.

In fact, Lufthansa director for marketing and customer services, Dr. Malte Bischoff, has stated categorically, that there will be no developments which are not clearly recognizable already today. That is not to say that over the next five years or so Lufthansa's experts do not expect accelerated evolution in the industry and the inevitable short time crisis which affect every undertaking. However, it is the progressive and forward looking attitude based on solid research by the airline's team of experts who are constantly examining new trends in marketing, which has successfully guided Lufthansa's fortune in the past and will continue to do so towards an optimistic future.

Lufthansa at a Glance

Traffic Results	1972	1973	1974
Passengers carried	8,523,201	7,984,445	9,602,105
Freight (tons)	208,878	243,979	265,254
Mail (tons)	35,569	36,697	39,364
Passenger load factor (%)	56	56	54
Overall load factor (%)	59	61	59
Flights operated	131,961	121,481	145,518
Kilometres flown (Millions)	159.9	162.2	181.0
Available ton kilometres (milltons)	2,899.0	3,203.7	3,718.6
Revenue ton kilometres (millions)			
Passengers	969.8	1,051.5	1,158.9
Excess Baggage	11.5	12.9	14.9
Freight	670.5	840.7	968.4
Mail	44.8	47.0	50.4
Total	1,696.6	1,952.1	2,192.6
Available seat kilometres (millions)	19,201.7	20,536.7	23,443.5
Passenger kilometres (millions)	10,667.4	11,555.0	12,758.9
Average distance flown by passenger (kilometres)	1,339	1,551	1,428
Average number of flight kilometres per week (thousands)	3,075	3,119	3,481
Unduplicated route network (kilometres)	403,257	405,811	406,309
Number of airports served	105	110	108
Operating aircraft as at December 31st (excluding training fleet)	79	81	86
Number of employees as at December 31st	22,888	23,761	24,441
Productivity per employee in ton kilometres (calculated on the available ton kilometres of scheduled and charter flights and on the annual average number of employees)	126,800	137,400	154,300

TRADE WINDS

Curbs on Dividends go

THE GOVERNMENT of India announced on July 3, 1976 the withdrawal of restrictions on declaration and payment of dividends imposed under the Companies (Temporary Restrictions on Dividend) Act, 1974, with effect from July 6. The restriction on the payment of dividends was imposed in 1974 as an anti inflationary measure. Under the Act the companies were restricted to declare and make payment of dividends to the extent of 12 per cent. Under the amendment introduced in 1975, the companies could declare dividends of more than 12 per cent but the excess was to be paid in two equal instalments. The government's decision now removes all these restrictions.

Exports During 1975-76

The revised figure of India's exports (including re-exports) for 1975-76 has reached a provisional total of Rs 3943.0 crores registering an increase of about Rs 612.4 crores over the value of exports of Rs 3330.6 crores (revised figure) in 1974-75. In a climate of recessionary situation when the world trade is reported to have increased by only four per cent in value in 1975, an achievement of the growth rate of more than 18 per cent in Indian exports during 1975-76 is of great significance.

Increase in Export

Exports have tended to increase all over the year except for the month of July 1975. Not only our exports could fulfil the year's target of Rs 3600 crores but even exceeded it by a margin of Rs 343 crores or more than nine per cent. Within a span of five years during 1971-72 to 1975-76, the magnitude of India's exports increased by 145 per cent.

The impressive gains achieved in the export front have not, however, been adequate to balance our trade accounts. A continued strain on food, fuel and fertilisers to meet the growing needs of our economy pushed up imports during 1975-76 to the provisional figure of Rs 5018 crores. The last three months of 1975-76 have shown a continued decline in imports. With some recent improvement in exports in relation to imports, the deficit of India's foreign trade in 1975-76 was lower than that in 1974-75. Against more than 18 per cent growth in exports, the imports expanded by some 11 per cent, much less than the growth of imports in the previous two years.

Some commodities emerged as growth items in the export from last year. The export statistics for April, February, 1975-76, show that exports of sugar had gone up by 57 per cent and that of engineering goods by 13.3 per cent. Other growth items were: silver (132.1 per cent), fish (90.0 per cent), iron ore (38.0 per cent), leather and leather manufactures including footwear (27.9 per cent), iron and steel (310.3 per cent), handicrafts (20.5 per cent), cotton apparel (34.9 per cent), raw cotton (113 6 per cent), groundnuts (79 6 per cent), tobacco unmanufactured (17.9 per cent), coal and coke (174.1 per cent), tea (4.8 per cent) and coffee (13.3 per cent).

Tin Container Units

The Department of Industrial Development has lifted the ban for registration of new units in the small-scale sector in all areas of the country which intend to manufacture tin containers and similar other products using tin sheets. This decision has been taken in view of the increased supply position of tin plates in the country and its increased production from 96,000 million tonnes in 1974-75 to about 1,16,000 million tonnes in 1975-76. Earlier, this item was put in the banned list by the Development Commissioner, Small Scale Industries, because of shortage of indigenous tin sheets in the country. In March 1976, this item was opened for being set up in the backward districts/areas as the availability of indigenous tin sheets had improved. Those entrepreneurs, who wish to register new units or expansion of the existing units for manufacture of tin containers and similar other products, should approach the state director of Industries with their schemes.

Departmental Account with Banks

The union government has introduced a fresh innovation to streamline its financial administration. Some of the public sector banks have now been entrusted with the work of handling government receipts and payments. All payments on behalf of the ministries will be made by cheques and drafts on the branches of the public sector banks accredited to a particular ministry. So far, the actual cash transactions were being handled only by the offices of the Reserve Bank and the branches of the State Bank of India or its subsidiary banks. The involvement of public sector banks would not only provide adequate relief to the State Bank but also ensure prompt settlement of claims and quicker compilation of accounts.

To begin with, some ministries and departments have been accredited to public sector banks. The State Bank of Patiala will act as banker for the ministry of Petroleum, Chemicals and Fertilisers; Bank of India will handle the transactions of

Department of Steel; United Commercial Bank will be accredited to the Department of Mines; Syndicate Bank will be banker for the ministry of shipping and transport; United Bank of India will handle transactions of the Department of Coal; and the Central Bank of India will look after the transactions of the ministry of Commerce.

Indo-GDR Cooperation

India and German Democratic Republic (GDR) expressed their determination to intensify further and expand mutual co-operation in the political, economic, scientific, technological, cultural and other fields. They also welcomed the successful conclusion of the all-European conference on security and co-operation in Helsinki. The joint communique issued in New Delhi and Berlin simultaneously and signed by the prime minister, Mrs Indira Gandhi and General Secretary of the Central Committee of the Socialist Unity Party of Germany, Mr Erich Honecker, at the end of Mrs Gandhi's three-day state visit to (GDR), stated that establishment of lasting relations of good neighbourliness between all states was an important pre-requisite for transforming Asia into a continent of peace and co-operation. They agreed that the forthcoming meeting of the Indo-GDR joint commission should explore the possibilities of englarging areas in the fields of scientific research and exchange of technology between the institutions of the two countries.

Cash Aid for Turn-key Projects

The government has decided to continue till March-end next year, cash compensatory assistance for turn-key projects to be set up abroad. The assistance was valid for three months from April this year initially. Thus the cash support for turn-key projects has also been made available for a full year as has been done in the case of engineering exports. There will be however no change in the existing rate of assistance of 10 per cent.

There was a move earlier to increase the rate of assistance. But this has now been kept in abeyance for the time being since data required for computing the new rates of assistance could not be monitored. In fact it was for the same reason that the cash compensatory scheme was extended for just three months to begin with.

Engineering Exports

An estimated Rs 400 crores has been secured by India's engineering industry through its exports effort during 1975-76 as compared to Rs 349 crores earned by it in the previous year. Barring a few exceptions, most of the product groups of the industry have displayed dynamism in the export endeavour in this year. There was notable improvement in the foreign exchange earning of textile and jute mill machinery, heavy electricals, wires and cables, wagons and coaches, road motor vehicles, mild steel wire products sanitary castings, aluminium products, hand tools, diesel engines, mechanical pumps, household electric equipment and scientific instruments.

The capital goods sector proved responsible for sizeable improvement in the export earning. While in 1974-75 its export value totalled Rs 116 crores, the estimated level reached in the subsequent year was of the order of Rs 151 crores. In this area, industrial plant and machinery exhibited encouraging signs of improved overseas demand. Besides textile and jute mill machinery, which earned Rs 21.8 crores in 1975-76 as compared to Rs 16.3 crores in the preceding year, the export growth was evident in respect of sugar machinery, cement machinery, food processing michinery and earthmoving machinery. The entire group of industrial plant and machinery earned as much as Rs 43.53 crores as compared to Rs 31.23 crores in the preceding year. Heavy electrical exports, which have, over the years, established a mark in the world markets, netted Rs 14.5 crores in the year under review as against only Rs 1.20 crores in the year before.

Jute Pact with EEC

India and the European Economic Community (EEC) agreed on a new jute trade accord, the EEC officials reported recently. It provides that India will limit its exports of various kind of jute goods until the end of 1979. In exchange, the EEC agreed to lower gradually its tariffs on Indian jute exports to zero level by July 1, 1978. The previous jute accord expired at the end of last year. In April, a similar accord on cocoa was signed with India. The tariff-free Indian jute exports to Britain and Denmark are being maintained.

Indo-Pak Rail Link

India and Pakistan recently signed an agreement to resume train services between Amritsar and Lahore on a date between July 17 and July 24. While there will be passenger trains only up to Attari border on India's side, the express train will cater to through international traffic only. Both the countries will contribute to the rake composition on a 50:50 basis. The question of affording through passenger coach services beyond Lahore and beyond Amritsar stations will be considered at a later stage. It was agreed that each country will collect the fares for the journeys of passengers on the respective systems up to the international border.

Deposit Insurance

With a view to providing a greater measure of protection to bank depositors, the Deposit Insurance Corporation has raised the limit of insurance cover for deposits in registered insured banks from Rs 10,000 to Rs 20,000 with effect from July 1, 1976. The present limit of Rs 10,000 per depositor was fixed in April 1970 when it was raised

from the previous limit of Rs 5,000.

The enhanced insurance cover will apply in the case of any liquidation or winding up of an insured bank on or after July 1, 1976, and compromise or arrangement or reconstruction or amalgamation of any insured bank sanctioned on or after that date with no provision for payment of amounts due to depositors. Where, however, the Corporation has already incurred any liability before July 1, 1976 the existing limit (Rs 10,000) of insurance cover will continue to be applicable. The premium payable by insured banks will continue to be four paise per Rs 100 per annum.

Directors for Urban Improvement Co.

The Company Law Board has appointed six government directors on the board of directors of the Urban Improvement Company (Private) Limited, New Delhi, for a period of three years. They are Lt Gen. R. N. Batra (retired), Lt. Gen. J S. Bawa, F-in-C, Mr R. K. Khanna (chartered accountant), Mr Lalit Bhasin, (advocate, Supreme Court), Mr S. P. Mitra, advocate, Supreme Court), and Mr O. P. Bhardwaj, (additional director, Urban Estates, Haryana).

Pata 1978 meet in Delhi

A separate cell is being created in the Department of Tourism to look after the arrangements for the Pacific Area Travel Association (PATA) Conference to be held here from January 23 to January 27, 1978. The dates for the conference have been chosen with a view to presenting to the delegates festival time gaiety, a spectacular parade, folk dances that go with the Republic Day each year.

RBI on Penal Interest Rates

The Reserve Bank of India (RBI) has told the scheduled commercial banks that the penal rates of interest on their advances should not exceed two per cent over the ceiling rates on advances (ranging between 16.5 per cent and 17.5 per cent) prescribed for the various classes of banks. It has asked banks to give separate treatment to certain categories of advances such as overdue inland bills, small loans up to Rs 5,000, loans granted under the differential interest rates scheme, direct agricultural advances and plantation advances and export credit.

Justifiable Part

In detailed guidelines issued on banks governing penal rates and service charges, the RBI has pointed out to banks that penal rate should not be regarded as a device for raising revenue but as a measure to ensure discipline in the conduct of the account. The RBI feels that penal rates cannot be objected to in principle and will have to be accepted as a "justifiable part" of the interest rates policy of banks, as long as they are applied with "selectivity and discrimination." It has been pointed out that the areas where banks may be justified in charging penal rates are default in repayment of loans, irregularities in cash credit accounts, non-submission of data, default in borrowing covenants, non-repayment or non-acceptance of demand bills on presentation, usance bills of exchange on due dates, and excess rent assets as recommended by the Tandon Committee.

Puerto Rico 'Summit

The seven leaders who met recently in San Juan, Puerto Rico, for an economic summit, announced that they had agreed to pursue the objective of sustained economic growth with policies that seek to avoid reigniting worldwide inflation. In a joint statement, issued at the end of the two-day summit, the leaders said that their objective "now is to manage effectively a transition which will reduce the high level of unemployment which persists in many countries and will not jeopardise our common aim of avoiding a new wave of inflation." During their meeting, the leaders agreed to consider creating a new multinational credit facility, possibly within the IMF to aid Italy and other developed nations that experienced temporary international payments problems.

Names in the News

Mr Rahul Bajaj, Chairman & Managing Director of Bajaj Auto Limited, has been unanimously elected as President of the Association of Indian Automobile Manufacturers for the years 1976-1977. Mr Bajaj is also the Chairman of the Development Council for Automobiles & Allied Industries.

Mr. Rahul Bajaj

Mr. K. N. Modi has been elected the President of the Northern India Cotton Textile Mills' Association. He is the Chariman of Modi Enterprises and takes deep interest in the social and welfare activities of the workers and residents of

Mr. K. N. Modi

Modinagar and surrounding areas. He had been Chairman of Pradeshiya Industrial and Investment Corporation of U.P. Ltd, and U.P. Electronics Corporation Ltd. He is a Director of U.P. State Industrial Development Corpora. tion Ltd.

COMPANY AFFAIRS

Gwalior Rayons

THE TOTAL turnover of Gwalior Rayons for the year ended March 31, 1976 was Rs 146.95 crores as against Rs 150.98 crores in the previous year. After making provision for depreciation, development rebate reserve and taxation the profit and loss account showed a profit of Rs 6.41 crores as against Rs 7.71 crores in the previous year.

The directors of the company have declared a dividend of 20 per cent on equity shares which will absorb Rs 2.11 crores. The preference dividend declared by the directors will absorb Rs 32.38 lakhs.

Bonus Issue

Subject to the approval of the Controller of Capital Issues, the directors propose to issue one bonus share for each equity share held by the shareholders by capitalising Rs 5.28 crores out of the general reserve.

In the field of exports the Engineering and Development Division of the company successfully completed the supplies of staple fibre plant and machinery to South Korea. The plant was erected and commissioned under the able supervision of the company's engineers. The company's pioneering venture was complimented by the Director General of Technical Development, as an achievement which "will go a long way in strengthening our image internationally." The company maintained its progress regarding exports of staple fibre machinery to Thailand and the project is progressing as per schedule. This joint venture staple fibre project will go into production by August 1976. Also the company exported 8,200 tonnes of Sodium Sulphate during the year as against 5,600 tonnes in the previous year.

Grasilene

During the year under review, the R & D wing of the company developed a new high performance fibre, which is being marketed under the trade name of 'Grasilene'. The company has made necessary applications for patent rights in India, as also to cover other countries such as the USA, West Germany, the UK, France and Japan.

The company has received a letter of intent for expanding its pulp manufacturing capacity further by 12,000 tonnes of superior quality pulp suitable for rayon filament/tyre cord industry.

The company is participating in the establishment of 100 tonnes per day capacity Caustic Soda/Chlorine project in collaboration with Bihar State Industrial Development Corporation in a backward district of Bihar at an estimated cost of Rs 16 crores. Also it is actively engaged in exploring the possibility of participating in a chemical complex to be set up in Malaysia.

Malco

The Madras Aluminium Company Ltd had to face serious difficulties on account of critical power position and low realisation for its products in the year-ended December 31, 1975. The power cut amounted to 75 per cent during a part of the year. Production losses amounted to nearly 5,000 tonnes of metal; also the company had to spend nearly Rs 40 lakhs to restart its plant.

Under the new integrated aluminium policy, announced by government of India in July 1975 the company had to supply 50 per cent of its production as levy metal, and the rest to be sold as non-levy metal in the open market. Due to consumer resistance and high prices of the products there was a piling of stocks with the producers.

The company's performance during the first half of 1976 is far from satisfactory. In order to improve the demand for the product the government reduced the excise duty on aluminium by Rs 1200 per tonne. Also the government permitted the manufacturers to export the metal. Though the manufacturers were able to reduce their stocks by exports, yet in the process they incurred a loss of Rs 500 to Rs 1500 per tonne.

Mysore Cements

Subject to the approval of the Controller of Capital Issues, the directors of Mysore Cements propose to issue one bonus share for every two equity shares held by the shareholders for the year ended June 30, 1976.

The production of cement in 1975-76 was 431,584 tonnes as against 370,859 tonnes in the previous year.

The company received a cash prize of Rs 2,500 and a cup for the highest percentage reduction in frequency rate of accidents in the industry from National Safety Council, ministry of Labour, government of India. The Director of Mine Safety for southern region has adjudged the company's limestone mine in Karnataka as the best in overall performance and has awarded the company the first prize for safety standards and working conditions.

Dunlop India

Gross sales of Dunlop India Ltd, for the year ended December 31, 1975 amounted to Rs 167.44 crores, recording an increase of 14 per cent over 1974. This increase in sales was mainly

due to higher selling price of the product.

The company was able to achieve a record turnover of Rs 7 crores—an increase of 32 per cent over 1974. The company received the special CAPEXIL award for outstanding export performance and promotional activities in 1974-75.

The company signed a technical consultancy agreement with Webstar, a company promoted by West Bengal Industrial Development Corporation, on behalf of Dunlop Ltd, UK. A similar agreement is being negotiated by the company with the Andhra Pradesh government also.

The company proposes to instal aerotyre retreading facilities at its Sahaganj factory in West Bengal. Hitherto all the aero tyres were being sent out of India for retreading. This facility will be saving the country a considerable amount of foreign exchange.

Haryana Financial Corporation

At the ninth annual general meeting of the shareholders of Haryana Financial Corporation held on June 21, 1976 the chairman Mr M. C. Gupta spotlighted the speed with which disbursements were being made in order to hasten the industrialisation of the state. The corporation disbursed six crores of rupees during the year ended March 31, 1976 taking total disbursement to more than Rs 29 crores. The increase in its operations inflated its income which crossed the Rs 2 crore-mark in the year under review. It goes to the credit of the corporation that it has successfully reviewed the cases awaiting financial sanction. Also, the time taken in sanctioning and disbursing financial assistance has been considerably reduced. While at the beginning of the year as many as 292 applications were awaiting disposal, their number came down to 83 only at the end of the year. In special cases, financial assistance was provided in two to three months.

Backward Areas

The corporation has continued to extend increasing volume of assistance to units in backward areas. As against financial sanction of Rs 2.59 crores in the preceding year, the corporation sanctioned Rs 2.72 crores to such units in the year under reference. What is more, there has been a steady increase in the number of such units year after year. The small-scale industries were also patronised by the corporation and attractive concessions were given to them.

However, the corporation encountered some difficulties in making recoveries of old loans. The chairman, Mr M. C Gupta is making great efforts to hasten recoveries and undoubtedly his efforts will be crowned with success, in view of the improvement in the economic climate of the country in general and the state in particular

South India Viscose

Despite a fall in production and prices of its products, the working results of South India Viscose Ltd have turned out to be satisfactory according to the chairman, Mr R. Venkataswamy Naidu. The output of rayon yarn fell by 16 per cent, staple fibre by 63 per cent and wood pulp by 19 per cent in the year ended December 31, 1975 as compared to the preceding year. The chief cause for the drop in production was power cut for several months though the strike by workers was equally responsible. The prices of staple fibre and rayon declined sharply and sales could be effected only thrugh big discounts.

Undaunted by these unfavourable trends, the expansion projects of the company are being pursued with vigour. It has received an industrial licence for the manufacture of 20 tonnes per day of polynosic fibre. At the same time, the capacity of the pulp plant is being doubled from 60 to 120 tonnes per day. The expansion or the pulp plant is expected to be completed in the beginning of 1978.

Joint Ventures

The company is particpating in the establishment of an industrial unit in Malaysia. A joint venture in association with promoters in Malaysia, it will manufacture wood pulp for rayon and paper.

The company is fortunate in having made satisfactory arrangements for the allotment of forests in Nilgiris and Kodai hills. However, the government of Tamilnadu has demanded sharp increase in the existing lease rates. The management hopes that a sympathetic view will be taken keeping in view the peculiar circumstances in which the company is currently placed.

TDA

The Trade Development Authority (TDA) has decided to extend its activities to

NOTICE

The Gwalior Rayon Silk Mfg. (Wvg.) Co. Ltd.

Registered Office: Birlagram, Nagda (M.P.)

Notice is hereby given that the Registers of Members and Transfer Books of the Equity and Preference Shares Series 'A' & 'C' will remain closed from Thursday the 29th July, 1976 to Tuesday the 24th August 1976 (both days inclusive) for the purposes of payment of dividend on 1,05,60,000 Equity Shares and 1,48,275 Preference Shares Series 'A' and 2,00,000 Preference Shares Series 'C' in the Company.

The dividend on Equity and Preference Shares Series 'A' & 'C' when sanctioned by the shareholders will be made payable to those Shareholders, whose names stand on the Registers of Members of the Company as on 24th August 1976 as under:

(i) Dividend on Preference Shares Series 'A' & 'C' on or after 4th September, 1976.

(ii) Dividend on Equity Shares on or after 11th September, 1976.

By Order of the Board
B.N. Puranmalka
Secretary

Birlagram, Nagda
Dated; 1st July, 1976

west Asia, Africa and other unexplored regions instead of confining itself to the markets of the developed west.

Mr S.G. Bose Mullick, union Commerce Secretary and Chairman of TDA, said recently in the capital that TDA did not want to be bound by any geographical constraints. It proposed to introduce flexibility in both the coverage of products and markets.

Mr Mullick said that TDA had evolved several novel instruments of export services. The technique of "buyer-seller meet" had paid rich dividends. The meets held at New York, and Dallas early this year helped the Indian exporters to book export orders worth Rs 11 crores on the spot. Besides, the meets generated inquiries worth nearly Rs 3.5 crores.

TDA's Achievements

Outlining the achievements, Mr Mullick said that TDA made a significant contribution in the field of automotive ancillaries during 1975-76. One of its client secured orders from a leading automobile manufacturer for the supply of specialised automotive fasteners as original equipment.

Unit Trust

Sale of units under the Unit Scheme, 1964 and 1971 which had been suspended by Unit Trust of India from June 7, 1976 for the purpose of the annual closing of its accounts, was resumed from July 1, 1976. Units will now be available for sale at the special price of Rs 10.30 per unit throughout the month of July. It is customary for the Unit Trust to sell units at a special concessional price at the beginning of its accounting year.

News and Notes

A Rs 20-crore spiral weld plant was commissioned as part of the **Rourkela Steel** Plant complex at Rourkela on June 17.

The plant will produce steel pipes ranging in diameter from 18 inches to 64 inches. The annual out-turn of 55,000 tonnes of large diametre pipes will go a long way to meet the requirements of the petroleum industry which is at the moment planning to lay a 1200 km pipeline from Gujarat to Mathura to carry the crude for refining at the Mathura refinery. The plant took two years to complete and has already gone into commercial production.

The general manager of the Rourkela steel plant, Dr P.L. Agrawal, said that the new plant had contributed significantly to make the oil industry self-reliant in regard to its pipeline needs. He said, Indian Oil Corporation had placed its first order for 86,000 tonnes of 24 inch diametre pipe for its projects and this alone will save the country foreign exchange amounting to Rs 30 crore. The total foreign exchange expenditure incurred on the spiral weld plant is Rs 7 crore.

New Issues

National Machinery Manufacturers Ltd is entering the capital market with an issue of 80,000 11 per cent cumulative redeemable preference shares of Rs 100 each for cash at par.

The company which was incorporated in 1947, with the main object of manufacturing textile machinery and spares in India went in for diversification in 1972 and started manufacturing synthetic fibre machinery and other sophisticated industrial engineering products.

The technical collaborators for synthetic fibre machinery are Barmag Barmer Maschinenfabrik, AG, West Germany.

The company will be spending approximately Rs 205 lakhs for modernisation of its Kalwe works, during the next five years. It also proposes to spend Rs 60 lakhs for its Baroda works.

Under the diversification programme the company will be manufacturing hydraulic variable gear boxes in collaboration with Gebr. Boehringer GmbH, West Germany and shuttle-less looms and spinning machines in collaboration with Societe Alsacienne De Constructions Mechnique De Mulhouse, France.

The issue opened on July 7 and will close on July 17, but not before the bank closing hours on July 9.

Dividend

(Per cent)

Name of the company	Year	Equity dividend declared for	
		Current year	Previous year
Higher Dividend			
Super Box	March, 1976	18	12
Elgi Rubber	March, 1976	12	9
Gwalior Rayon	May, 1976	20	12
MICO	Dec., 1975	14	12
Same Dividend			
Premier Mills	March, 1976	12	12
Wandleside	Dec., 1975	5	5
Lower Dividend			
Food Specialities	Dec., 1975	Nil	17
S.R.P. Tools	May, 1976	Nil	3.75

The British India Corporation Ltd., Kanpur.

Chairman's Address

Statement of Shri P.N. Mathur, Chairman, The British India Corporation Ltd., for the year 1975 at the 56th Annual General Meeting held on Monday, the th June, 1976.

FELLOW SHAREHOLDERS AND FRIENDS,

I have great pleasure in extending to you all a warm welcome to the 56th Annual General Meeting of the Corporation.

2. The Directors' Report and the Accounts for the year ended 31st December 1975 have been circulated and, with your permission, I shall take them as read.

3. We have passed through a very momentous year in the history of our country in 1975. With the declaration of emergency, a climate of political stability has been created; labour-management relations have become more cordial; and the inflationary trends have been reversed. One of the off-shoots of emergency, which has directly benefited the corporation has been the virtual elimination of the entry of smuggled goods in the country. The disappearance of easily available cheap - priced smuggled ready-made woollen garments and woollen fabrics from the market has helped the sale of indigenously produced woollen goods in the country and your Corporation has been able to achieve a record turnover in 1975 which is about 18% higher than in the previous year.

4. The large turnover has, I regret to mention, not been able to generate sufficient profits even to cover the small depreciation charges. Although the reasons for this state of affairs have been enumerated in the Directors' Report, I would like to mention in passing that old plant and equipment and a high complement to staff were serious constraints on production and marketability of our products at a satisfactory price level.

5. Replacement of the old obsolete machinery for the worsted system under the modernization programme is being actively pursued with the financial institutions for which financial aid will be necessary. It is expected that this programme will be undertaken in two stages; the first stage to be completed by middle of 1978 and the second by middle of 1979. Two important machines for the first phase which were to be imported were indigenously fabricated in consultation with our technical staff and these are expected to be in position by September this year. I hope that after modernization, it will be possible to manufacture worsted materials in a wide range of counts and we will be able to cater for the fashion market right through the year on a bigger scale. After completion of the modernization programme, it should be possible to reduce the cost of production and to produce high quality products yielding a better margin of profit.

6. Funds for modernization of plant and machinery to be obtained from financial institutions have to be supplemented from internal resources. Under the present conditions in which our Kanpur Unit is placed, it may be increasingly difficult to generate funds from own resources. However, every effort is being made to improve profitability and to introduce economies so that the Corporation's contribution in this direction can be achieved.

7. It is unfortunate that unlike the cotton and jute industries, woollen textile industry is not eligible for Investment Allowance under the amended Income-tax Act. There is no reason for this unfair treatment to this important industry of the country which fulfils important needs of the Government, exports a sizable quantity of its products and caters for the masses, both urban and rural, living in the cooler regions of the country. The importance of this industry is in no way less than that of the cotton textile industry or the jute industry and there is no reason why the Investment Allowance should not be granted to the woollen textile mills of the country.

8. For the implementation of the 20-point programme to increase production through the handloom sector, your Corporation decided to collaborate with the U.P. Export Corporation Ltd. in the form of a Joint Sector Project for the manufacture and for dyeing of carpet yarn at Bhadohi. This project is economically viable and it will serve the needs of a deserving section of our community, namely the handloom weavers, who will be able to obtain carpet yarn on more reasonable terms at their door-step so that a much larger quantity of handloom carpets can be woven and made available for exports. It is hoped that the contribution of the Corporation to this project will be a matter of satisfaction for all concerned.

9. Due to the present financial problems, the Corporation has not been able to render more service to the rural areas but the importance of improving the earning capacity of the masses in rural areas and thereby enlarging the scope of expansion of industries, particularly consumer goods industries, is not being overlooked. With a view to help the rural areas, a Company of the B.I.C. Group, The Saran Engineering Company Ltd., has undertaken a pilot project for fabrication of equipment for making cement out of rice husk ash with the help of a scientist from the Indian Institute of Technology, Kanpur. The pilot plant is under trial in the factory premises of the said Company and the finished product from this plant, though not as good as portland cement, will have an equally good application in brick laying, masonry and plastering.

10. With the exception of the Saran Engineering Co., other group companies

namely the Textile Units and the Sugar Units have not fared at all well. However, some improvement has been noticed in the year 1976 as the Sugar Companies are expected to show profits and the Textile Mills may show slightly better performance.

11. As you are aware, the 20-point programme has been enlarged to include five more points for adoption as national policy, viz family planning, afforestation, urban development, national fitness and child welfare. These five points should now be treated as social responsibilities of business. Family planning is most crucial for the progress of our country as the ever-increasing population nullifies all efforts at raising the standard of living. Some measures have already been taken to motivate the staff for family planning. These measures need to be intensified and steps are being taken in that direction.

12. I would like to thank my colleagues on the Board for their valuable guidance. Shri M.C. Sarin resigned from the Board during the year. I wish to place on record our deep appreciation of his valuable services. Shri Bahadur Murao, Member, Bureau of Industrial Costs & Prices, has joined the Board vice Shri Sarin and is a very welcome addition. So is Shri A.S. Gupta, Zonal Manager, Life Insurance Corporation of India, Calcutta, who was appointed as an Additional Director and is due to be elected at this meeting.

13. This is a year of re-dedication for us being the Centenary Year of Cawnpore Woollen Mills. Hard work and discipline, which our Prime Minister has been emphasising, should be our motto to improve production and profitability.

14. I would end by thanking all our workers, staff and officers for the good work done by them during the year.

Note: This does not purport to be a record of the proceedings of the annual general meeting.

NATION REGAINS
SPIRIT OF ADVENTURE 1975-76

Drive against Black Money

- The underworld of smugglers smashed. Top smugglers behind the bars; 42 smugglers declared absconding and their property seized.
- Ceilings clamped on vacant urban land. Transfers within ceilings forbidden.
- Limits on area of dwelling units set. Valuation of luxury houses to nab tax evaders. Direct taxes collection up by 27.4 per cent since July 1975, following tax raids.
- Income and wealth exceeding Rs. 15,870 million disclosed by over 250,000 declarants under Voluntary Disclosure Scheme. Tax revenue Rs. 2,490 million.

davp 76/90

RELEVANT TECHNOLOGY

Following is the speech delivered by Mr. T. Thomas, Chairman, at the Annual General Meeting of Hindustan Lever Limited, held at Bombay on Thursday, 24th June, 1976.

INTRODUCTION

India is reaching a stage of criticality in its technological momentum. Therefore, I thought it would be appropriate to examine what kind of technology would be relevant to our country and what contribution your Company is making to such relevant technology. A historic perspective has been provided in order to make the analysis more meaningful.

SCIENCE & TECHNOLOGY

Although science and technology are closely interlinked, there is a clear distinction between them. While science provides the 'Know-why', technology provides the 'Know-how'.

Science can exist and has done so in the past for long periods (e.g. atomic science) without being converted into technology. Similarly, once upon a time technology was derived directly from arts and crafts (e.g. distillation or metallurgy) without any understanding of the science behind it. But over the centuries, a strong linkage has been established between science and technology. And modern technology is the result of deliberate application of science.

Today an organisation can progress in technology only if it has a base in science (i.e. R & D). Conversely, the only way science can tangibly influence or benefit society is through its conversion into technology which is relevant to the needs of society.

TECHNOLOGY & ECONOMIC DEVELOPMENT

Throughout history, economic development has depended on technological progress which passed almost like a wave over the countries from East to West—from China, India and Egypt to Greece and Rome, later to the Islamic Empire and to Renaissance Italy and culminating in the Industrial Revolution in Europe spearheaded by Britain. In all this the trail of economic progress was identical to that of science and technology.

Perhaps man's first technological step was to take up organised cultivation of desirable crops which we now call 'agriculture'. This momentous step was taken because of the crisis reached in the early man's parasitical hunting economy as animals vanished or were exhausted from within reasonable reach. Similarly, throughout history, a large number of technological innovations were created in response to that recurring crisis of organised violence which we call 'war'. Yet another type of crisis which contributed to technological progress was the force of deprivation. A telling example was the discovery and use of coal in Britain in the eighteenth century because of the increasing shortage and cost of wood as a fuel. This led to mining and usage of coal which in turn resulted in a revolution in the engineering and metallurgical industries.

Thus, in the past, economic progress through technology was as a result of some kind of crisis. But in the present century planned use of science and technology for economic development has taken place in both the capitalistic as well as the socialistic societies. Science and technology have now become the recognised instruments for economic development.

CONTROL & USE OF TECHNOLOGY

The effectiveness of technology depends very much on who controls and uses it. In early human civilisations from China to Peru, the intellectual priests and the rulers believed that proper contact with celestial powers was more important than terrestrial problems. Hence the emphasis was on the study of stars or on the building of pyramids and temples to propitiate the gods. Although these beliefs and activities stimulated science and technology (e.g. astronomy, architecture), they did not contribute much to the well-being of people. In a later civilisation, the Greeks made tremendous progress in logic, mathematics, philosophy and architecture. But most of it found little application in simple activities like agriculture which were relevant to the welfare of the people.

Over the centuries the sponsorship and control of science and technology passed from the hands of private geniuses and princely patrons—first into the hands of people motivated by commercial interests (i.e. business and industry) and later (especially in this century) into the hands of governments. This evolution in the control of science and technology into the hands of agencies with increasing social responsibility should normally be considered an advantage.

Unfortunately, one of the major interests of governments (and hence of many large manufacturers) in technology and science in the most developed countries, has been its use for Defence. It has been reported that only about half of total R & D in advanced countries is directed towards purely non-Defence purposes. A major portion of today's scientific resources is devoted to the pursuit of organised violence between States which seem to emerge into a stage of adolescence and have to prove their virility in this suicidal fashion before they almost inevitably decline in the way of the Greeks and the Romans. In fact, if in a later century, a retrospective view were to be taken about the distribution of scientific and technological endeavour during our times, there could be a strong indictment of the present civilisation.

However, in spite of this diversion of significant effort to Defence purposes, the relevance of science and technology to the well-being of larger sections of society has come to be recognised increasingly because all governments are ultimately accountable for economic progress and not merely for Defence. It is this factor of "accountability" that often compels organisations as well as individuals to become more relevant.

TECHNOLOGY IN INDIA GOES 'CRITICAL'

Against such a historic perspective, I believe that our country is fast approaching, if it has not already reached, a point of criticality in the advancement of science and technology in the same manner as chemicals reach a critical point in their reactive transformation. My belief is based on the following factors:

Throughout history India has preserved an intellectual class that was interested in sciences such as astronomy, astrology, mathematics, architecture, yoga, ayurveda and metaphysics. We have thus sustained an intellectual base.

We have a political system which owes its existence and will owe its survival to the well-being of the largest proportion of people in the country. It cannot be preserved either by enriching a few or by territorial acquisitions. It is therefore bound to seek economic development which has inevitably to be based on technology that is relevant for this purpose.

In independent India of the 20th century, we have been fortunate in having in both Pandit Nehru and Smt. Indira Gandhi, Prime Ministers who at the highest political level have recognised the role of science and technology in economic development.

Science and technology being agents of change are radical in nature. India is in a ferment of change—change even in age-old social customs like dowry or the size of families. This radicalism provides an effective climate for advancement of technology.

If historically crises have often contributed to advancement of technology as was described earlier, we have one of the most potent crises on hand—the crisis of deprivation of at least 250 million people,

not merely of firewood as it was in Britain of the 18th century, but of more basic necessities like food, clothing and shelter. It will compel us to find solutions in technology and that too in the none too distant future.

Fortunately for us, scientific knowledge and technology are cumulative and not exhaustible. During the last half century there has been a greater accumulation of technology than has taken place in the whole of the previous period of human civilisation. This has created a powerful potential force for flow of proven technology into our country.

In the same period, our country has built up the world's third largest force of scientists and technologists. As against 67,000 science graduates and 53,000 engineers in 1950, today India has over half a million science graduates and nearly half a million engineers. Even if one were to apply a factor for discounting the quality of some of these numbers, it is still a very impressive growth and a formidable number. It is also estimated that by 1985 our number of scientists and engineers will exceed 2 million which would be more than what several developed countries will have by 1985.

Instead of being confined only to elite universities, the study of science and technology has spread throughout the country. Coupled with improved means of communication, this has made science and technology more familiar to people at large and their usefulness is being increasingly realised even in the farming communities. Thus we have attained a level of receptivity for technology which did not exist even in many developed countries at a corresponding stage of their economic development.

India has now an industrial base to employ and to exploit the findings of scientists and technologists. The private sector has passed from the age of the trader-investor, who through hereditary management tried to obtain the fastest return, to a new class of professionals who are willing to invest in the future through R & D. The public sector is being increasingly weaned from the civil service umbilical cords and managed by people who have greater involvement and knowledge of the technology. All these changes must contribute to a greater and more rapid mastery and exploitation of technology for advancement.

The versatility of technology available in the country has expanded considerably in the last 25 years. In that period, we have acquired and successfully absorbed modern technology for steel, fertilizer, non-ferrous metals, machine building and heavy engineering. We have broken into petro-chemicals and atomic power.

For all these reasons I believe that India is on the threshold of great advancement.

RELEVANCE OF TECHNOLOGY

In this context, what should be the most appropriate test of relevance to be applied to technology for India today? Is it the ability to catch up in sophistication of products? Is it the production of better armaments, faster vehicles or bigger buildings? Perhaps only some of these, and certainly many others, are necessary. But the most relevant need in our country today is economic development, especially of the less privileged sections mostly located in rural areas.

There is a tendency to overrate technology merely because it produces something new or sophisticated or because it is imported. Much of the technology that is relevant to our current economic development will have to be for the production of more basic and therefore apparently simple products like foodgrains, edible fats, low cost housing, etc. Just because the end product looks simple, the technology need not be considered less sophisticated. Very often the technology for such basic needs cannot be imported and has to be developed indigenously. Therefore, such technology tends to be devoid of the label 'imported' which is almost synonymous with 'sophisticated'. We must learn to value technology more for its relevance to our basic needs than for any labels.

With that as the touchstone for grading technology, we should not be concerned so much with the complexity of any technology as with its potential to contribute to basic economic development.

It is also necessary to draw a distinction between what is spectacular and what is relevant. When ancient astronomers predicted the movement of stars or modern technology placed a man on the moon, it was spectacular. Popular opinion is most impressed by such spectacular feats of science and technology. But often the spectacular is not relevant to the generation that is impressed. They become relevant, only to the extent of, and only when, consequences from such feats benefit a sizeable part of population. And this usually takes a long time. For instance, the study of astronomy had over a period of time benefited early man in his planning of agriculture as it could indicate the periodic change in weather. Perhaps one day when the earth is overpopulated or new resources have to be imported from other planets, the space technology of today may have more direct relevance to the common man. The spectacular feats have to be thus converted into relevant technology before they become useful.

In the intervening period, in addition to spectacular achievements, each country has to try and develop what is currently relevant to its needs because all of us live in the short term. And the poorer a man or a nation is, the shorter is the available time horizon whether it is for planning or for reaching the end of one's tether.

EXAMPLES OF RELEVANT TECHNOLOGY

It will now be interesting to formulate some examples of technology that would be relevant to India. Over 70% of our population lives in rural areas and are engaged in agriculture. About 50% of our GNP is derived from agriculture. Therefore, anything that would improve agriculture would be at the top in any ranking by relevance.

Agriculture starts with the preparation of soil. Of course, everybody knows that it is best done by modern mechanical implements and a tractor. But how many farmers in India can afford to buy a tractor costing Rs. 60,000 and then to run it. It is no wonder that we have only about 300,000 tractors in the whole country. Therefore, to seek a solution exclusively through such advanced technology has only limited relevance in our country today. Let us, therefore, consider how the present system of preparing the soil by using bullocks and the plough can be improved. Is there a way of improving the tractive power of the bullock? An innovation which revolutionised agriculture in medieval Europe (in the eleventh century) was the adoption of a horse collar instead of a band across its breast. The band used to constrict the horse's windpipe whereas the collar pulling on the horse's shoulders did not create such a disadvantage. The result was a five-fold increase in tractive effort of the horse. Will it not be very relevant for one of our Institutes of Technology to study the problem of improving the efficiency of ploughing with bullocks or buffaloes?

Another area of great importance is the provision of improved seeds which can improve productivity of agriculture. Although very commendable work has been done in wheat, cotton and even castor seeds, there are very important crops still neglected, e.g. oilseeds.

Yet another facet of agriculture is the use of agricultural and forest waste. The production and use of gobar gas is an example of this. But the biggest product of agriculture is the cellulosic material it creates in very much larger quantity than the millions of tonnes of cereals and pulses. After all, cellulose is not chemically very different from carbohydrates. Can a technology be evolved to upgrade it for human or more effective animal nutrition?

The whole field of water management for agriculture is something that agricultural scientists alone cannot tackle. Are we attracting enough civil, mechanical and chemical engineers to evolve new technology for (a) conserving water, and (b) more economic utilisation of water?

These are a few examples (necessarily somewhat speculative) which could illustrate what could constitute "relevant technology" for India. But to pursue such relevant technology, it is necessary to engage and attract a larger proportion of our new generation of scientists and technologists away from the spectacular and the seemingly sophisticated to the relevant. Will it not be more relevant for a larger proportion of our young engineers to work on problems of agriculture than on computer technology? Of course, the country needs both but perhaps more of the former. Yet, at present, our young technologists seem to be more attracted to the latter. What seem to attract them to such glamorous areas of technology are the monetary rewards and the professional recognition that are more readily obtained in those areas. Therefore, it is very necessary to make the rewards and satisfaction more attractive in the more relevant areas. For the cumulative effect of a large number of even minor improvements in agriculture, transport, mining and production of basic goods can be far more important to our economy than occasional dramatic feats in highly advanced technologies.

OUR CONTRIBUTION TO RELEVANT TECHNOLOGY

Responsive Evolution of the Company

Your Company has evolved over the decades and has responded to this era of technology and science. This Company started in the last century as a trading company, which imported and sold goods through agents. Later on it became a marketing company with managers who were engaged to find out what the consumer needed and to serve the market accordingly. The next stage was for us to become a manufacturing company. This led to a mastery of technology involved in our manufacturing operations and a widening of the technological base. And the most recent stage in this evolutionary process has been our investment in science, i.e. R & D in the last 20 years. This has provided more basic understanding and thereby further enriched the technological base, and its relevance to the needs in India.

There has also been a corresponding change in the composition of the Company's management team. Today more than 50% of our managers are scientists and technologists and it is no accident that three out of the four Chairman appointed in the recent past have been technologists. This responsive evolution of the Company has enabled it to make contributions in science and technology related to the areas of our business.

Examples of our contribution

Let me now give you some examples of relevant technology that has been developed and used or is in the process of development, as a result of our investment in science and technology.

Oils & Fats

Our major area of expertise and interest—one flows from the other—is that of oils and fats. As a result of almost 15 years of R & D work, we have obtained an insight into the chemistry of most of the oils and fats available in India and have developed original plant-scale processes to upgrade unconventional oils for use in consumer products.

(i) Let us take the example of castor oil. Scientists have known the fatty acid composition of castor oil for many decades and the fact that ricinoleic acid in castor oil causes undesirable properties if used in soap making. Therefore, castor oil, although nonedible and available in large quantities (almost 100 000 tonnes per annum) could be used and is still used by most other soap manufacturers only in a very low proportion in soap making. Higher usage causes problems both in processing the soap and in the quality of soap in usage by the consumer.

Yet, higher levels of usage of castor oil in soap making would not only release from soap making a corresponding quantity of possibly edible oils, but also provide a more steady and better value for castor which is cultivated mostly by marginal farmers. As India is a fat-short economy, it would also result in saving import of oils.

These considerations led us to examine castor oil more closely. While the concept of dehydroxylation of castor oil had been known widely, we developed for the first time the optimum conditions for plant-scale dehydroxylation in such a manner as to render the processed triglyceride suitable for increased usage in soap making. This process has been patented by us. In actual plant operations, further improvements have been made and as a result, today we are in a position to use about 20,000 tonnes per annum of processed triglycerides from castor oil. We are now working on further improvements in technology, e.g., vapour phase reaction to improve efficiency and to provide a still better quality product.

(ii) Or take the case of sal fat. When a forest contractor from Orissa approached us several years ago with a small quantity of sal seed, it was known that it had sal fat which had a very greenish colour but could be used in the manufacture of certain grades of soap. So we encouraged him to collect and supply the seed for extraction. The sal tree sheds its seeds in the forests of Orissa, Madhya Pradesh and Uttar Pradesh, in a few weeks before the monsoon. The collection and usage of sal seeds have a greater relevance as it provides productive employment and income (*albeit* seasonally) to a large number of the most underprivileged people in our country.

It was known that sal fat has a triglyceride configuration which could impart quality characteristics similar to cocoa butter which is very expensive and is essential for the manufacture of chocolates. But this knowledge had to be translated into technology which could upgrade the crude fat into an acceptable triglyceride. We have succeeded in doing so through fractional crystallisation and in finding a market for it among the chocolate makers of the world. The process is now in plant-scale operation and in 1975 we exported 2,200 tonnes to earn foreign exchange of Rs. 4 crores. But still there are areas of ignorance around the chemistry of sal fat. We still do not know the trace impurities that seem to cause considerable variation in the user characteristics of the end product. Is it caused by something in the different species or in the soils? Does it happen during storage or extraction? R & D work continues.

Nutrition & Biology

Because of our involvement with foods, we have developed over the years a R & D nucleus in biological sciences. An area of great interest to us is human and animal nutrition—both of which are of considerable relevance in our country.

(i) A significant contribution was made by us in the formulation of an economic but nutritionally balanced diet for the 'Sukhadi' programme operated during the famine of 1972 in Maharashtra. Our R & D laboratory evolved the formulation which was freely given to and adopted by the relief agency operated by Maharashtra Government through Sadguru Seva Sangh. It was a very gratifying example of how R & D in the private sector could contribute to public programmes for alleviation of suffering.

(ii) In the field of animal nutrition it is now possible to observe and analyse the process of rumination and digestion in a live animal by a new method of fistulation. This enables scientists to understand more fully how a goat or buffalo derives its nutrition from different materials it consumes and how these materials undergo changes during the period of their being processed in the ruminant's stomach. Such a scientific understanding will lead to better formulation and nutrition.

(iii) Another very different but interesting piece of biological work our scientists have completed is with regard to prawn farming. Instead of having to harvest the prawns from the sea, can we grow them in ponds in the wasteland near the sea or inland? This could make considerable difference to the fortunes of the fisherfolk who have an uncertain source of income. Selection of variety, formulation of special feed, optimisation of conditions for growth etc. were areas of research. As a result, we have evolved a process for prawn farming which is ready for large-scale trials. Since we are not in a position to exploit it commercially, this technology is available for exploitation by more suitable agencies.

(iv) Complementary to our work on oils and fats and because of our involvement in the area of animal nutrition, we have developed technology for detoxification of several conventional and unconventional oil cakes. For example, Indian groundnut extractions are at a discount in the export market, (mainly Western Europe) because of the possible presence of a toxin called aflatoxin. Cottonseed extractions cannot be used in significant quantities in feeds for non-ruminant animals because of the toxin gossypol present in it. Sal extraction has tannin as a toxic element in it. We have now developed processes for detoxification of all these. Our scientists are working on detoxification of even one of the more difficult cakes, namely castor cake. We believe that blessed with a significant amount of sunshine which is the source of all photosynthesis, India has the potential to be a supplier of protein to the world—provided we can develop technology to process and upgrade our proteins.

Toxicology

This is a branch of science and technology which is new to our country except in the pharmaceutical and medical world. But as we are using increasingly more indigenous unconventional materials, it is necessary to undertake toxicological testing to determine the safety of these materials in actual use. For example, before raw or processed sal extraction was used in cattle or poultry feed it was necessary to determine the toxicological effects and safety limits. Several new techniques in toxicology have been introduced and adapted by our scientists for such testing.

Agriculture

A major part of our business is based on agricultural products—oils and fats, oil cakes, etc. We know that it is essential to raise the production of oilseeds in India. In addition to funding extension work on groundnuts through the Vanaspati Manufacturers' Association, we have now directly undertaken research in sunflower which we think holds significant promise in this country as it did in USSR, Eastern Europe, Turkey and lately in Pakistan. The major problem with

regard to sunflower is the evolution of a suitable variety for India We have initiated varietal trials and breeding by our own agricultural scientists. Can we get a sunflower that will droop and prevent picking of seeds by birds? Can we get more drought resistance? Which variety will give more yield? We are seeking answers to these and similar questions. Although we are not going to be directly involved in agriculture, we hope to make effective use of our findings through universities and extension work. The experience we had gained in upgrading the variety of peas (from desi to Bournvelle) in Western U.P. in the sixties and from the extension work with essential oil plants in U.P., Assam and South India is now proving useful in this new effort.

Chemicals

We are makers of chemicals—catalysts, fine chemicals, oleo-chemicals—and in future, heavy chemicals.

(i) A significant contribution has been in the manufacture of Nickel Catalyst for hydrogenation. In addition to providing an improved variety of catalyst through R & D, 80% of nickel requirements can be met from recycled material thereby effecting significant saving in imports.

(ii) Our Fine Chemicals manufacture receives considerable backing from R & D. We have evolved processes for as many as 20 chemicals in the last few years. In one of them the technology is available only with two other parties in the world. We have already agreed to sell this technology to another party in India.

(iii) R & D of even greater relevance but in a somewhat longer time span is our attempt to use microbiology for production of chemicals. One of the most significant advances in science in recent years has been the understanding of biology at the molecular level. This enables us to manipulate bacteria and use them for specific purposes. We have already succeeded in producing glycerol from molasses biochemically at twice the concentrations reported in previously published work. We are now working on biochemical conversion of an agricultural waste into a chemical which could revolutionise a common household product. These are bordering on the speculative, whose relevance may be only in the future,. But in the meantime we have developed a very sound base in the understanding of mutation of micro organisms, the technology of fermentation and all the allied scientific and technical problems and a capability in the emerging field of biochemical processes.

Process Technology & Equipment

A very important area which is somewhat neglected in our country is that of process technology. All R & D does not have to begin with the fundamentals of science. A very rewarding base for R & D is existing processes in established industries. It has a great deal of relevance in India because of the following reasons:

(a) Engineering technology in India has advanced considerably in the last 20 years and therefore it is possible to undertake R & D in process technology.

(b) Process efficiency has to be optimised with reference to consumption of materials, quality of product, cost of equipment, usage of labour and energy. The balance of these factors are in many cases different in India as compared to more developed countries. Therefore, the technology relevant to us could be different and has to be developed and assessed locally.

(i) Take, for example, the extraction of glycerol from soap. Through R & D we have been able to develop a technology which is unique in India and which does not require high speed centrifuging (involving imported equipment and high power consumption) and yet extracts the glycerine with high efficiency. It takes a little more space and labour both of which are cheaper in India than equipment of energy.

(ii) Or take the manufacture of synthetic detergents. We have by now developed the technology for manufacture of all the equipment required for sulphonation, high pressure blowing, airheater, control panels etc. so that the entire plant can be indigenous. And there are many other examples of developing process technology and equipments more relevant to our needs.

MANAGEMENT OF SCIENCE

In the old days, scientists, like artists, had to be left almost entirely to be guided by their inspirations. Most scientific work centred around individuals. These characteristics still persist in academic science.

However, for the successful application of science and technology to industrial and economic development, the effort has to be managed. First of all, there has to be an agreed set of objectives for R & D work. Secondly, those who are responsible for sponsoring the work as well as the scientists who carry out the work have to accept the discipline of accountability. Thirdly, most scientific work today has to be conducted as team work involving inter-disciplinary effort which in turn has to be dovetailed to economic objectives. All these call for management of science.

In fact, in the absence of such management of science, frustrations can arise among scientists because of (a) lack of direction and purpose for their work; (b) the absence of accountability either to evaluate or to utilise their findings; and (c) the absence of linkage with, and feed back from, end-users of their technology. The scientist and technologist need direction, recognition, reward and restraints like all other managers do. These can be provided through the well-understood principles of management. This is necessary to make science and technology relevant to agreed objectives.

Your Company has acquired some valuable experience in the management of science. We have instituted a system of Projects Planning and Monitoring. A major part of R & D work consists of projects each of which has been discussed and agreed with the relevant operating management group in the Company, which is responsible both to provide the funds for the work, as well as for utilising the results of the R & D work. Each project has an agreed set of objectives, an estimated cost, an expected time span for completion and an approximation of the chances of success. On the basis of these parameters the operating business group and the R & D group enter into a mutually accountable system of monitoring progress.

However, while the operating management are organised according to product groups, the R & D personnel are organised according to scientific disciplines. Any given project may require a combination of different scientific disciplines e.g. Organic Chemistry, Surface Chemistry and Chemical Engineering. To reconcile these, a matrix form of management is used whereby scientists come together in inter-disciplinary project teams while still remaining as part of their respective disciplinary groups.

This system of managing science has resulted in (a) more purposeful results from R & D ; (b) greater satisfaction and recognition for the scientists who can see all their work evaluated fairly and many of them adopted in practice; and (c) better appreciation and responsibility for R & D work among senior operating managers. In short, it has made R & D more relevant to the business.

However, we are conscious of the fact that in our anxiety to pursue what is relevant for today, it is necessary to preserve and nurture the spirit of scientific exploration. Therefore a portion of our R & D effort is left to the total discretion of the scientists and technologists without any immediate linkage with the operating business. This freedom to explore is vital for the scientist to preserve his skills and to seek excellence. Thus our management of science tries to achieve a blend of excellence as well as relevance.

CONCLUSION

We are in the business of developing technology that is relevant to the consumer—in the India of today and tomorrow; in the India of small towns and villages.

Relevance is dynamic; it changes with time. Therefore, whilst we should always apply the test of relevance to technology, we should also look ahead to see what might be relevant tomorrow. It might involve some projects that may appear to be speculative. Can we make synthetic fatty acids from petroleum and do so more economically than the Russians and the Japanese? Can we upgrade cottonsseed protein to make it edible for human beings, thereby making available over 2 million tonnes per annum of protein source richer than wheat? Can we find out more about ageing of people—what causes their skin and their hair to age? Can we understand more clearly the way toxins work and create processes that will eliminate toxins from materials that can be used for animal nutrition? The answers to these and similar questions may provide some of the technology that will be relevant for the socially purposeful survival of your Company.

Note : *This does not purport to be a report of the proceedings of the Annual General Meeting.*

Sundaram Finance Limited

37, Mount Road, Madras 600 006

Speech delivered by Shri T. S. Santhanam, Chairman, at the Twenty-second Annual General Meeting of the Company held on 14th June, 1976, at Madras.

Dear Friends:

I have great pleasure in welcoming you to the 22nd Annual General Meeting of your Company. The Directors' Report, the Audited Balance Sheet and the Profit & Loss Account for the year ended 31st December, 1975, have been circulated to you and with your permission, I shall take them as read.

WORKING RESULTS 1975

I am happy to inform you that the Company had yet another successful year of operation during 1975. The working results disclose a sharp rise in the gross income from hire purchase business and from other sources, as well as in the net profits before taxation. The amount advanced on hire purchase contracts during 1975 stood at Rs. 1,309.77 lakhs as against Rs. 1,346.23 lakhs in the previous year. The stock-on-hire representing the total amounts outstanding under hire purchase agreements stood at Rs. 2,123.15 lakhs as at 31.12.1975 against Rs. 1,776.32 lakhs as at 31.12.1974. The earnings under hire purchase transactions in 1975 were Rs. 314.26 lakhs compared to Rs. 219.36 lakhs during 1974. The administrative expenses were higher at Rs. 45.37 lakhs as compared to Rs. 34.20 lakhs in the previous year. This can be attributed to variable expenses directly relating to higher volume of business done during the year as well as other factors, which were beyond our control.

DIVIDEND

Your Directors have recommended a dividend of 16% for the year 1975. Under the provisions of the Companies (Temporary Restrictions on Dividends) Act, 1974, as amended, Immediate Dividend shall be 12% on the Paid-up Capital and the balance of 4% is payable in two equal annual instalments, i.e., one in July, 1976, and another in July, 1977 together with interest at 8% p.a.

BONUS SHARES

You will be pleased to note that your Directors have recommended the capitalisation of an amount of Rs. 50 lakhs from the 'General Reserve' of the Company and the issue of Bonus Shares at the ratio of one equity bonus share of Rs. 10/- each for every two equity shares of Rs. 10/- each held by a shareholder. The Bonus Shares will rank *pari passu* in all respects with the existing shares of the Company and shall be entitled to participate in any dividend that may be declared for any financial year commencing from 1st January, 1976. After the approval of this proposal at this Meeting and after obtaining the sanction of the Central Government, the Bonus Shares will be issued to the shareholders whose names stand on the Register of Members of the Company on a date to be decided by the Board of Directors.

DEPOSITS

I am glad to state that the Company continues to enjoy the confidence of the depositors. The total deposits with the Company as at 31-12-1975 stood at Rs. 1,177.50 lakhs compared to Rs. 968.17 lakhs at the end of 1974.

ECONOMIC CLIMATE

In my last two reports, I have been referring to the paramount need to tackle the problem of inflation affecting the country and bring down the prices of basic necessities. I am glad to note that as a result of the various measures taken by the Central Government, the raging inflation has been contained and there is a general decline in the price level of essential commodities.

STATE OF AUTOMOBILE INDUSTRY

The serious problem faced by the automotive industry today is the fall in demand for passenger cars and commercial vehicles, particularly the former. Government, both at the Union and the State levels, has been trying to prop up demand by marginal fiscal reliefs in respect of passenger cars. By the joint efforts of the Central Government, automobile manufacturers, automobile ancillary producers and the dealers, it has been possible to bring down the price of passenger cars to an appreciable extent. Many State Governments have reduced the sales tax on passenger cars sold in their States. It is hoped that these measures will help to improve the demand for passenger cars.

The off-take of commercial vehicles has been affected due to the high cost of chasses, increase in motor vehicles tax by the States and rise in operational costs. It is gratifying to note that the Tamil Nadu Government has recently allowed a fare rise of 1 paisa per kilometre from the middle of March, 1976. It is felt that this will, to some extent, improve the profitability of the passenger transport operators.

Above all, the threat of nationalisation of passenger road transport inhibits the replacement of old buses by new ones. As a cumulative effect, the demand for new passenger chasses continues to show a downward trend.

DEVELOPMENT OF ROADS

The expenditure on roads, which represented nearly two-thirds of the revenue from motor vehicles tax of State Governments and the fuel tax of the Union and State Governments during the First and Second Plans, has come down to less than 30% during the Fifth Plan. Roads serve not only the Road Transport Industry, but are an essential communication system for the 700,000 villages in our country and are used by nearly 20 million bullock-carts, hand-carts and pedestrians. Government should seriously consider giving a boost to the expenditure on roads, by doubling what it has been spending to increase the road mileage and bring every village with a population of 500 and above within the reach of the National Highways, State Highways and major district roads. We have now a surplus of bitumen and the surfaces of the roads have also suffered considerably during the Third, Fourth and Fifth Plans. A 100% increase in the expenditure on roads, road construction, road surfacing and maintenance will bring about a substantial increase in the employment potential at the villages, as agricultural labour can be employed during the off-season for this purpose. This will augment the income of the agricultural worker and provide greater employment opportunities for the people in villages and small towns. Improvement in the roads and the road surfaces will bring about a reduction in the consumption of fuel and wear and tear of the tyres and spare parts, which will be a national saving. This will help the road transport and automobile industries to attain the Fifth Plan targets.

PROSPECTS

Agricultural production and production of foodgrains touched a record level during the year 1975-76. Buffer stocks of foodgrains have been built up to satisfactory levels as a result of brisk procurement operations of the Central and State Governments. This was possible due to good monsoons, both South-West as well as North-East. The power position has vastly improved and there may not be any power cut in the Southern Region.

The declaration of Emergency has brought about a healthy climate in commerce and industry and better industrial relations. With a repetition of a good South-West and North-East monsoon, there is every possibility of a boost in the economic activity by the end of the year. The increase in Plan expenditure for 1976-77 will also have a favourable effect on the economy by the end of this year. The State Governments have not fully relaxed the movement of foodgrains between states and within the State. We hope that they will remove the restrictions resulting in the pick-up of the goods traffic by road.

Next to food, clothing and shelter, transportation is a basic necessity and is an essential infrastructure for the development of commerce and industry. It is indeed heartening to note that this fact has been acknowledged in the 20-Point Programme announced by our revered Prime Minister. We welcome the decision to issue National Permits for transport of goods, which will greatly facilitate the free movement of goods from one end of the country to the other. It is in this context, the move announced by the Union Transport Minister to abolish octroi in some of the States, is most welcome. Your Directors hope that the Central and State Governments will come to a decision in favour of abolition of octroi and check-posts. This will help speedy movement of goods, which is vital for the efficient functioning of trade and industry and will also result in the saving of fuel.

The unmatured finance charges as at 31.12.1975, viz., the finance charges which are available for appropriation in the future years in respect of the hire purchase contracts executed in 1975 and earlier years, have touched a record level of Rs. 449.90 lakhs as compared to Rs. 340.86 lakhs as at 31.12.1974. This was possible on account of the payments against hire purchase documents exceeding Rs. 1,300 lakhs each during two successive years, 1974 and 1975. The payments during the first 5 months of 1976 amounted to Rs. 453.67 lakhs as against Rs. 450.83 lakhs for the corresponding period in 1975. Your Directors are confident of maintaining the profitability of the Company in the current year also.

ACKNOWLEDGEMENT

On behalf of the Board of Directors and myself, I wish to place on record my appreciation of the good work done by all the members of the staff of the Company. I also wish to express my thanks, on behalf of your Company, to all the depositors and customers for their continued support.

Finally, I thank all the members present for making it convenient to attend the Meeting

This does not purport to be a record of the proceedings of the Annual General Meeting.

Mahindra Ugine Steel Company Limited

Statement of the Chairman, Mr. Harish Mahindra

Following is the statement of the Chairman, Mr. Harish Mahindra to the Members on the occasion of the 13th Annual General Meeting of the Company held in Bombay on the 28th June, 1976.

THE EMERGENCY declared in June last year was in many respects a catharsis. There have been many gains from this drastic measure. It has brought about disciplined conduct in public life. It has enabled the initiation of progressive socio-economic policies.

Since the middle of last year, there have been other important gains including political and economic stability, which are so pivotal for progress and which constitute a bulwark for rapid growth. In this sense, in the past a heavy price has been paid in terms of lapsed time by including in the luxury of disturbance and disorder. Having performed this quantum-jump from chaos to order, let us resolve that there will never once again be an atavistic reversion to the politics of turbulence.

Business has been successfully interacting with the Government and there are no major differences of opinion between the two as regards the broad aims and objectives of economic growth. But in the formulation and implementation of policies in respect of complex issues, it is not unexceptional that there is no unanimity. Nevertheless, there is a frank exchange of views between the Government and Business at every point of contact. There is also a general undercurrent of liberalism in most Government policies. It is the business of Business to take full advantage of the present helpful situation and boost industrial investments. Our latent promotional capabilities must be stretched to the maximum extent.

While the climate for rapid advancement in the economic field is now most conducive, there are, however, a few policy areas where clearer thinking is required. For instance, the price situation appears to be the arbiter in much of decision-making in regard to pulling industries out of dull business conditions as well as in regard to quickening the tempo of growth and development. The Government itself has acknowledged the state of listlessness in several ways, such as by the introduction of fiscal measures to provide relief and to expand demand, increasing the plan outlay for Centre, State and Union Territories by an unprecedented 31.6 per cent in the current year over the previous year, liberalisation of imports to actual users and exporters and so forth. What needs to be underlined here is that although the proposed outlay for 1976-77 of Rs. 7,852 crores constitutes the largest step-up in investments, nevertheless during the last two years of the Fifth Five-Year Plan as much as Rs. 18,588 crores would have to be raised or an average of Rs. 9,294 crores during the two year period ending 1978-79, if the Fifth Plan outlay of Rs. 37,250 crores is to be met. This would pose a formidable challenge not only to the Government but also to the private sector, from which during the Fifth Plan period there would be a net transfer of resources of as much as Rs. 14,000 crores. The point here is that Industry could be said to be poised for rapid growth only when they have no short or long-term problems of serious under-utilisation of established production facilities. This aspect has not received the attention it really warrants. Secondly, there is as yet no Fifth Plan document delineating these issues so that the units and individuals both in the Public and Private Sectors may brace themselves to the tasks ahead. Thirdly, it was a totally different set of circumstances, high speed inflation in particular, that decreed a package of stringent measures, which I have mentioned earlier. Although the objectives of anti-inflationary strategy have been achieved, this has not been without a sacrifice of buoyancy in the economy and a contraction in economic activity, the tell-tale signs in this respect being the post-haste fall in the demand for a number of items like steel, cement, fertilizer, textiles and others. Therefore, keeping in mind the leads and lags that revival measures involve—longer than those of deflationary measures—a returning of the economic policies particularly those relating to credit restraints and interest rates brooks no delay, especially for purposes of hastening the expansion in economic activity. It should be added that while enforcing the Tandon Committee norms, a special effort may be made not to leave out of account the peculiar difficulties of individual borrowers and where there is justification, a relaxation may be made in such norms. At the same time the Banks may be free to oversee the end-use to which the credit has been put.

White Paper on Steel

Earlier this year, in my capacity as President of the Federation of Indian Chambers of Commerce & Industry, I had emphasised the need to think in unconventional terms to promote India's development. In

this context, I had suggested that to bring about a transformation of our predominantly agricultural economy into an industrial one, we must have an ambitious 10-year plan providing for 100 million tonnes of steel, 200 million tonnes of cement, 250 million KW of electricity generating capacity and so forth. It is heartening to note that the Government themselves are thinking along the same lines. In this White Paper on the 25-year roll-on development plan of the Iron and Steel Industry laid on the table of the Parliament last month, a tentative target of around 75 million tonnes of steel-making capacity by the end of the century has been hinted at. The investment cost per tonne would amount to as much as Rs. 14,000 in 1993-94 as against Rs. 4,600 1974-75 at the present rates of inflation. However, it would be misleading to give a per tonne capital cost of Rs. 4,600 or Rs. 14,000 or any other figure without mentioning the nature of the post-ingot stage facilities intended to be created, inasmuch as the product-mix has a bearing on the capital cost.

Economics of EF Operations

The role of the Electric Arc Furnaces, which at present have an installed capacity of about 3 million tonnes and a licensed capacity of 5.5 million tonnes (liquid metal) in augmenting production appears to be de-emphasised for two reasons. Firstly, even at present there is an acute shortage of scrap, availability being of the order of 2.2 million tonnes and requirements, if the furnaces are worked to full capacity, being almost double that. The units in the Electric Furnace Industry have been working constantly under the fear of soaring scrap prices every time capacity utilisation in the Mini Steel sector goes up beyond 40/50 per cent. As a solution to the emerging shortage, a far-sighted decision has been taken for setting up a string of sponge iron plants all over the country. Assuming that by 1985 all the licensed capacity of 5.5 million tonnes would have been installed and there would be adequate availability of power and the feed-stock of scrap/sponge iron, to work such units to their full rated capacity, the EF Industry inclusive of the Castings and Alloy and Special Steel sectors should be able to contribute about 4.5 to 5 million tonnes (depending upon the progress in implementing the projects) or between 25 to 35 per cent of total steel production.

In about 5 years when the Bombay High yields 10 million tonnes of crude oil and when gas from the Bassein structure, where large volumes of reserves have been discovered, would also be tapped, there would be an abundance of this strategic fuel and energy source. This potential surplus has awakened interest in Midrex and HyL Direct Reduction Processes based on natural gas, inasmuch as, they would provide a solution to the appropriate use of such a bonanza. The authors of the White Paper, from this angle, should be commended for alerting the authorities that they should be ready with Sponge Plants by the time gas starts flowing, which, according to the Minister for Petroleum, would be not later than 2/3 years.

For the Electric Furnace Industry, the year 1975 was a very difficult and trying one. Over a hundred units shut down their operations, being not able to find a market for their products. They were priced out of their stronghold viz. Bars and Rods market by the Integrated Steel Plants. After numerous representations to the Government in regard to the inherent cost handicap of the Electric Furnace Process, the Union Government took a sympathetic view in November last year and reduced the effective rate of excise duty on ingots produced in Electric Furnaces from Rs 200 to Rs 50 per tonne. There is ample justification for elimination of the whole of the balance of the excise duty of Rs 180/- on Electric Furnace products, inasmuch as they are made out of steel scrap, which in its prime steel condition has already borne its full share of the excise burden. The Government has actually accepted this logic by totally exempting from excise duty products of the Re-rolling Industry made out of re-rollable scrap, inasmuch as the burden of excise duty had already been imposed on such scrap when it was prime steel. Just because the process of recycling is much longer in the case of EF Industry, there is no justification for not going by the same logic.

In this setting, the January 1976 decision of the Supreme Court in the case of the State of Tamilnadu V/s Pyarelal Malhotra, setting aside the award of the Madras High Court and restoring the orders of Sales Tax authorities would not only impose a fresh burden on the Electric Furnace units, but would also push up their prices making their products still more unattractive and uncompetitive. It has now been held that iron and steel manufactures even if they are made out of ferrous scrap material which has already borne the Sales Tax in one way or the other could be taxed again. Manufacturers and dealers would not be entitled to the customary resale claim albeit the fact that the different sub-entries belong to one single category of 'declared' goods viz. iron and steel. At one stroke this new burden has taken away a sizable chunk of the benefit derived by electric furnace units by way of reduction in excise duty from Rs 200 to Rs 50 per tonne.

Excise duty relief, the lifting of the restrictions on construction activity, the slightly better price realisation for electric furnace products in recent months and a couple of other favourable developments have not so far served to resuscitate Mini-steel units and they continue to languish. The increasing trend in the prices

of scrap over the past four months has not made it any the easier for them to start afresh. The loss in terms of employment, national income, revenue to the Government, and delays in the repayment of loans and interest to term-lending institutions/banks and so forth are by any criteria grave and pressing issues that call for urgent aid to restore health and vigour. A package of policy measures including financial succour, cash incentives for exports and total exemption from excise duty and sales tax at the product-stage would definitely revive this vital segment of the Steel Industry.

Diversification of the product-mix of the Mini-steel units into Alloy and Special Steels as a solution to the crisis in the Industry is firstly not always feasible on account of several practical constraints such as lack of funds for additional technical inputs as well as for sophisticated plant and equipment and others. Secondly, according to the estimates of the Ministry of Steels themselves, where such diversification is feasible, the market for Alloy and Special Steel being limited, it would very soon be saturated with supplies, even if a fraction of the total number of units opt for such diversification. As it is, the existing and established units in the Alloy Steel Sector are faced with the problem of unlifted finished products and loan order books.

In this somewhat disheartening situation, one welcomes the appointment of two well-known consultancy firms for the purpose of undertaking an indepth study of the technical inadequacies, requirements of balancing equipment and other related issues. It should be hoped that their recommendations would improve our insight into the nature of the problems and particularly, how best the immediate and long-term development programmes of the tonnage steel plants can be interlaced with those of the Mini-steel units. Also the announcement regarding the proposed creation of a separate cell for the Mini-steel units in the Ministry of Steel has not come a day too soon. The cell should enable the Government to bestow special attention on the plight of the units and come forward with relief measures more promptly.

The wide gap between the requirements of scrap and its availability is not only in the case of the higher density categories of steel scrap but also in respect of those on the merit list for export purposes. Besides the better use of all available indigenous scrap, this predicament would necessitate its improved collection and recycling as also imports of substantial quantities thereof. Under these circumstances it is puzzling as to how one could come forward with a suggestion to relax the present export curbs! The suggestion if implemented would be detrimental to the EF units in more ways than one. Exports would not only accentuate the requirements-availability imbalance but would also push the scrap prices up to the exhorbitantly high levels of mid 1974, adding still more units to the sick and infirm list.

In regard to imports of melting scrap which is likely to become a sheer necessity if demand for the products of the Industry picks up and the power position is satisfactory, it must be pleaded that since so far there have been no imports and the present duty of 40% on scrap has been only a paper source of revenue and has not yielded any revenue to the exchequer, it might as well be scrapped. Imported scrap should also be inexpensive if it has to be used at all. It is advisable that the MSTC through which imports are canalised in consultation with the Industry draws up a plan for scrap imports after duly satisfying itself about the quantum of the emerging scrap shortage.

Power

As against the average power deficit of about 3% in the country, Maharashtra has a deficit of more than 5%. In absolute terms the shortage of power in Maharashtra is reported to be about 2 million KWH per day. The power cut in the State continues to inhibit production and viewed from a perspective planning angle, the shortage of power in the State is likely to assume alarming proportions in the years to come, unless steps are taken on a war footing to increase the power generation in the State by establishing super-thermal stations. Sooner the integrated grids are created, greater would be the flexibility for diverting power from the surplus States.

The cost of power supplied to Electric Furnaces is of decisive importance in the overall cost of production. Next to scrap, it is the largest cost element in electric furnace steel production. Therefore, power is not only a prime mover but also a basic raw material. The power cost in Maharashtra for electro-metallurgical operations works out to more than 22 Paise per unit as compared to an average rate of 16.64 Paise in the Punjab, 18.23 in Rajasthan 18.30 in U,P. and 17.04 in M.P. I, therefore, reiterate my earlier pleas that restructuring of the tariff for electro-metallurgical industries in the State of Maharashtra with a view to bringing down the unit cost, should not be deferred any longer.

Expansion

With the fruition of the merger of Bank of Baroda Ltd. with the Company, I have now great pleasure in welcoming the shareholders of the erstwhile BOB Ltd. into our family which will, thus, get enlarged to around 13,700 shareholders. You would not have failed to note in the Balance Sheet that during 1975, compared to the relevant data for the previous year, there have been sizable increases in all assets. This is mainly on account of the receipt of about Rs 8.15 crores in the form of deposits and cash, consequent to the amalgamation of Bank of Baroda Ltd. with your Company.

This amount has been earmarked for the expansion programme already underway.

There has been satisfactory progress in the implementation of the project for expanding the capacity from 24,000 tonnes to 60,000 tonnes per annum of finished tool, alloy and special steels. Most of the major items of plant and equipment are expected to be received between the 4th quarter of 1976 and the 1st quarter of 1977. Excavations for buildings and plant and equipment foundations have practically been completed. Considerable headway has been made in fabricating the steel structures for the buildings. The 4th bay of the heat treatment and finishing shop building is nearing completion.

Your Company is making a reappraisal of the capital cost of the expansion programme, having due regard to the steep appreciation in the values of foreign currencies in terms of the Rupee, escalation in cost of plant and equipment and the need for import of certain items of plant and equipment originally contemplated to be procured indigenously.

The expansion project is scheduled for completion by the end of 1977. Once commercial production at your Company's 60,000 tpy. plant is established, it will be geared to meet the special requirements of some of the key and strategic sectors, such as, defence and defence-oriented industries, commercial vehicles and automobiles, tractors, aircraft, atomic energy, space technology and so forth.

Outlook

The working results of the Company during 1975 have been dealt with in the Directors' Report. I am happy to inform you that your Company's order book position continues to be satisfactory mainly on account of the reputation your Company has built up as a dependable supplier of sophisticated alloy and special steels notched to the special requirements of individual consumers. Total sales realisation during the first 5 months of the current year were of the order of Rs 668.07 lacs as against Rs 514.22 lacs and Rs 538.73 lacs during the corresponding periods of 1975 and 1974.

It is heartening to record here that your Company has been exploring several other business avenues with a view to broad-base its business activities. Firstly, as has been stated in the Annual Report, we are in the process of acquiring 14,500 Equity Shares in the Capital of Wheelabrator Alloy Castings Ltd. (WAC). WAC's Plant is located very close to our Plant in Khopoli. We have offered technical assistance for putting the operation of WAC on a sound footing. The terms and conditions governing the offer of technical assistance would be of considerable benefit to your Company, as it would enable your Company to utilise optimally its own post-ingot stage facilities, particularly after Expansion. Secondly, the Merchandising Division of your Company has made a beginning in the exports of pharmaceutical intermediates.

Note : This does not Purport to be the Record of the Proceedings of the Thirteenth Annual General Meeting of the Company.

THE INDIAN SMELTING & REFINING CO. LTD.

Regd. Office : Bhandup, BOMBAY 400 078

NON-FERROUS UNIT :
Lal Bahadur Shastri Marg
Bhandup, BOMBAY 400 078
Cable : 'LUCKY' Bhandup
Phone : 584381

FERROUS UNIT :
Pokhran Road
Thana, Maharashtra
Cable : 'MALLEABLE' Thana
Phone : 593851

Telex : ISARC 011-2384

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   (ii) Copper/Brass/Bronze/Nickel Silver Sheets, Strips & Coils

2. **FERROUS UNIT :**
   Malleable Iron, Spheroidal Graphite Iron and Special Steel Castings.
   Supplied as per ISS, BSS, ASTM Specifications and Party's specific requirements.

Haryana Financial Corporation

Speech of the Chairman, Shri M.C. Gupta, I.A.S.

The following is the speech of Shri M. C. Gupta, I.A.S., Chairman, Haryana Financial Corporation, delivered at the Ninth Annual General Meeting of the shareholders held on the 21st June, 1976 at Chandigarh.

Friends,

I indeed feel privileged in meeting you, the shareholders of the Haryana Financial Corporation, this day to present to you the Directors' Report and audited statement of accounts for the year ending 31st March, 1976. These documents have been with you for some time now and I trust I have your permission to take them as having been read. The year under reference has been, perhaps, the most significant in the post-Independence era. A year ago, almost to the day, the country was struggling to get out of the quagmire of indiscipline, dissensions, runaway inflation and a general contempt for law and order. The common man and the small entrepreneur had to pay the price as man-made shortages and the distorted pricing of articles of daily need both for consumption as well as inputs kept on soaring. The parallel economy which is gathering greater momentum held a vicious grip on the economy of the nation. The strong measures taken a year ago to restore the economic and social order came as a shot in the arm. The nation has not looked back since. The cumulative effect of the vigorous drive launched against the smugglers, the tax-evaders and the hoarders and other anti-social elements, alongwith greater emphasis on providing support to legitimate productive endeavours, the rationalisation of credit facilities so as to withdraw credit from those who were seeking to enrich themselves at the nation's expense, the diversion of these funds for better use and for augmenting production, and a general toning up of administration, simplification of the licensing procedure brought about a stabilisation, in fact, even a reduction in the price-index to the relief of everybody and to the envy of some other countries who had been unsuccessfully trying to achieve a similar objective. Utilisation of the capacities has increased many fold and recent studies have indicated that even the much maligned public sector undertakings have miraculously within a span of an year, reached record levels of output and have in some cases crossed the capacities installed. Amongst major decisions taken may be listed the emphasis on revival of sick units subject to their inherent capacity to add to overall product on levels within the country, unqualified support to bonafide export oriented production in the hope of trying to stabilise balances of trade and payment in the shortest possible time, the elimination or liberalisation of many licencing requirements both for the establishment of new units or for expansion or enhanced utilisation of existing ones, reduction in the ceiling of interest rate for bank credit, emphasis on recoveries of the defaults committed without due justification, and the establishment of the Industrial Development Bank of India as the apex financial institution with new goals and redirected targets.

2. The year 1975–76 is expected to yield an unprecedented growth in real national income of 7 per cent including an almost 9 per cent growth in the agricultural sector (the latter comprising as much as 11 per cent in foodgrains). The growth rate achieved is well above the plan target of 5.5 per cent. According to figures just released the year 1975-76 showed an industrial growth of 5.7% well above the anticipated 4.5%. Metals registered the most significant increase in this period. Part year comparisons for 1975–76 against corresponding period of 1974-75 appeared to indicate as much as a 102 per cent increase in Copper, 20 per cent in Aluminium and more than 15 per cent in Steel. Like-wise chemical based industries, coal, automobile tyres, sugar, vanaspati, soap and many other industries also registered significant increases. Despite concerted efforts, however, indications for real per capita income indicated only a growth of the order of 5 per cent in view of the more than 2 per cent population growth rate estimated. While Government have recently taken a number of decisions with the intention of restricting growth in population, it is unlikely that the figure would diminish very rapidly and consequently efforts must continue to be made to achieve more significant break through in industrial and agricultural production. While generally speaking there has undoubtedly been a very salutary impact on the state of the economy, there have also been certain side effects. Amongst the salutary effects may be cited for instance the easy availability of steel following largely from increased production by the public sector undertakings which, apart from the slowing down of construction activity as well as of new industrial investments led to a drop in its price. Amongst the side effects may be listed, on the other hand, the fact that most of the small steel plants were knocked out of the market. This is a phenomenon by no means restricted to steel and the fact undoubtedly is that the increased production in such industries where investments had been made without the anticipation of full utilisation of capacities made them suddenly become excessively competitive and even unremunerative, a situation which was aggravated by the inevitable slowing down of investments precisely for the same reasons, and a generally recessionary outlook in the earlier part of the year. But as I have said, I do not expect the temporary re-adjustment problems being faced by the economy to be of a long lasting or quasi-permanent nature and I am confident that these will sort themselves out in the near future. The greater degree of productivity brought about in an econo my previously verging on a state of total arbitrariness is in my view a highly welcome change.

3. While the encouragement being offered to production in the current policies of Government will undoubtedly encourage the economy, the fact that a stage has now come when further investments require to be made on the basis of a careful analysis and projection of capacities available and utilised, and prevalent demand as anticipated, cannot be too highly emphasised. Ill-judged investment decisions, or investment decisions based on deliberate under-utilisation of capacity, are a national waste which cannot be permitted and instead all available resources must be diverted towards investment in nationally desirable and under-invested areas of industry only. The lead taken by the Government of India in re-defining such areas and, inter-alia, in setting apart items for the small scale sector must be very enthusiastically welcomed. It is sincerely hoped that Government would continue to revise their guidelines as frequently as possible and that entrepreneurs would abide by such policy guidelines. Should they not do so, concerned financial institutions must refrain from providing any assistance to such units.

4. While on the subject it may be worth stating that similar studies should be carried out and their results enforced in respect of small scale units as well. In the absence of available resources for undertaking detailed market, demand, and feasibility studies, the small scale investor is often guided in his investment decision by the performance of similar units in his neighbourhood. In doing so, he frequently loses sight of the fact that while a certain number of such units in a given area may be viable, further investments made by him, and possibly others, in the same area for the same product may make both the existing as well as the new units uneconomical for want of market, raw material, labour or other considerations. The inevitable consequence is that both the existing and new entrepreneurs as well as the supporting financial institutions end up by making inherently bad investments which not only fail to provide any return to any of the parties concerned but jeopardise investments previously made. We are already considering, from the current financial year increasing our emphasis on this aspect and of restricting investments of this nature. In our endeavours we devoutly seek the assistance not only of the entrepreneurs concerned but also of the various State level and Central level Government agencies.

5. One of the related problems which still remains to be attended to is the serious scarcity of essential and up-to-date data on which

the entrepreneur and financial institution alike can base their investment decisions. The establishment of a really streamlined and effective organisation to collect, compile analyse and make available to all those concerned essential input and output data on the basis of rapidly collected and accurate statistics which are as upto-date as possible is long overdue. A national organisation from which an entrepreneur may be able to obtain within a matter of a few days up to-date information about availability of raw materials, prices, markets, costs, production levels and so on, alongwith projections for the future, would make the task of all concerned very much easier.

6. To achieve production and investment levels of the required order, industrial investment shall have to be made very rapidly in such sectors of industry as require these investments. The extreme shyness which had become evident in the capital market and the reticence of entrepreneurs to make fresh investments in a somewhat unpredictable economic climate must be overcome, therefore, very urgently indeed. Advantage must also be taken of the revival of other economies quickly to develop to the extent feasible Indian exports to both established and developing world markets. The relatively low labour cost—a fact only on the assumption of equivalent labour output—can be utilised in the new climate of disciplined labour forces to the dual benefit of the country's employment needs and of its balance of trade.

7. In this scheme of things it would become imperative for all governments, government agencies, and financial institutions to take the lead in promoting productive investments with the minimum of delays and hesitations.

8. We, in the Haryana Financial Corporation have striven during the last year to keep in step with the need of the time and to play, according to our charter an effective promotional role in achieving national and state aspirations and goals. We have also been conscious of the fact that a financial institution such as ours has a very vital role to play in widening the industrial base of the country, in providing employment, and in increasing outputs, and above all we have been acutely conscious of the fact that if progress has been slow we and other institutions must squarely accept our responsibility for the general tardiness.

9. While the inflow of applications diminished significantly from a total number of 308 applications received for industrial loans in 1974–75 to a mere 194 such applications in the last year, and similarly, on account of the improved power situation, from 217 applications in the preceding year to merely 29 applications in 1975–76, the Corporation has not been idle in their disposal. Consequently, industrial loans were sanctioned to 104 concerns in the outgoing year showing an improvement of 33 on the previous year's figures of 161. In terms of business generated, we have succeeded in maintaining a growth rate in sanctions, even if nowhere near the galloping pace achieved in the earlier years. As a result we were only a little less than Rs. 6 lacs short of the Rs. 10 crore mark as on 31st March last with a cumulative effective sanction level of Rs. 42 crores approximately. Our disbursements, however, continued to grow rapidly and during the outgoing year we disbursed over Rs. 6 crores bringing total disbursement to over Rs. 29 crores as on the 31st March last. Along with the growth in our operations there has been a rapid growth in our earning and our gross income during 1975–76 crossed the Rs 2 crores mark leaving profits before taxation at over Rs. 81 lacs.

10. Our performance in sanctions and disbursements has been particularly notable, apart from other reasons, because of the fact that lending operations for the acquisition of generting sets declined substantially as a result of the improved power situation, and our operations in favour of transport operators remained suspended during the year. One of the less prominent, but in many ways much more significa t, achievements was the reduction of the number of cases pending sanction and the time taken in sanctioning and disbursing financial assistance. Thus, as against 292 applications for assistance of all kinds pending at the beginning of the year, the number had reduced to merely 83 at the close of the year. We have also been successful in expediting decisions on loan applications received and, increasingly, it has been possible to sanction financial assistance where merited in a period of 2 to 3 months. Similarly, I believe that with an increasingly more realistic approach towards the problems of entrepreneurs, it has been possible to cut down the time taken between sanctions and disbursement. In order to aid beneficiaries and the Corporation alike in prompt decision making, the Corporation has brought out revised guidelines of a fairly comprehensive nature which are being made available to entrepreneurs seeking to apply for assistance from it. Apart from providing basic information on the schemes being offered by the Corporation, its procedural requirements and formalities, the guidelines also set down lucidly the essential data requirement without which it becomes difficult to process applications expeditiously.

11. Another interesting highlight of the Corporation's performance in the past year has been its operations concerning the development of backward areas. The Corporation has continued to increase its stake in financing industrial units in backward areas and was able to sanctions Rs. 2.72 crores to such industrial units as against Rs. 2.59 crores in the previous year. As has been mentioned in the Director's Report, while the number of units benefiting was less than in the preceding year, the amount sanctioned was somewhat higher and the indications seem to be that larger units are being increasingly set up in these areas.

12. Similarly support to small scale industries has grown significantly with a considerable increase in the amount sanctioned and, in this case, there is an increase also in the number of industries financed. We continued to extend during the year 1975–76 highly attractive concessions to units being set up in such areas with the result that a small scale unit availing of assistance of up to Rs. 2 lacs from the Corporation if situated in an identified backward area and if refinanced by the Industrial Development Bank of India, which made prompt repayments, needed to pay an interest rate of only 9.5 per cent on financial assistance of up to 80 per cent of its fixed assets.

13. Another attractive scheme which continued to be sponsored was the IDA Line of Credit. Under this scheme loans could be sanctioned by the Corporation for the import of capital equipment against a credit first made available by the International Development Agency in 1971. The Haryana Financial Corporation too played its part in securing the full commitment of the credit on a national basis within the stipulated time, and has thus enabled the country to negotiate for a second line of credit which will become operative from the current year. It would be a cause of satisfaction to all of you that the performence of the Corporation in this programme has been commendable.

14. One of the less satisfactory aspects of the Corporation's performance unfortunately has been in effecting recoveries. It is a matter of regret that a combination of factors, the most noteworthy amongst which was the persistent power crisis within the State, coupled with the operational difficulties of the loanees, handicapped the Corporation and its clients from achieving more satisfactory results. Within the constraints imposed by the overall economic climate, the Corporation has endeavoured to recover its dues to the extent possible and, in fact, in gross amounts we have succeeded in recovering, even if occasionally under duress, a higher amount than in the previous year. Total recoveries during 1975-76 was of the order of Rs. 2.58 crores against Rs. 2.01 crores in the previous year. Despite this, the gross amount in default increased from Rs. 1.22 crores to Rs. 2.34 crores. With the improvement expected in the general economic climate I hope it will be possible for us to gain ground in this aspect of our operations.

15. Finally it would be relevant for me to add that the Corporation has been endeavouring to bring about structural and organisational changes in order to better equip itself for the tasks which lie ahead. The outgoing year saw the initiation of an internal training programme aimed at better preparing its personnel for discharging the duties expected of them promptly and efficiently. In addition, some changes have already been made in the organisation and deployment of personnel and further extensive streamlining is on the anvil. It is contemplated during the current year to enlarge the services rendered by the Corporation so as to provide some essential merchant banking functions and possibly to extend this further in the direction of providing nucleus consultancy services, primarily for the benefit of the small scale entrepreneurs in projects which do not call for sophisticated technology, engineering or production methods. The basic objective is to provide under one roof a package of services, with speed and precision, and to remove thereby from the shoulder of the entrepreneur the burden of running from pillar to post in attempts to secure the multifarious services and clearances essential for the establishment of a project. How far we may be able to transform this ambition into reality is a matter on which, I hope to be able to report only next year.

16. In conclusion, therefore, I trust that we may all look back upon the past year with some gratification born of the fact

that, whatever our shortcomings have been, and I, for one, would not dispute that there still remained many, we have indeed achieved a fair measure of success, and above all, the satisfaction that our endeavours have been in the right direction. In thus directing our efforts, my particular thanks must go to my colleagues on the Board of Directors of the Corporation in whom, despite the relatively short period in which we have worked together, I have come to acquire close confidence and trust, and from whom I have unfailingly received the utmost co-operation. We must also, I feel, acknowledge with gratitude the assistance and co-operation always made available by the Industrial Development Bank of India, the establishment of which as the apex body for institutions such as ours under the new set up must heartily be welcomed, the Reserve Bank of India, the Industrial Finance Corporation of India, the Life Insurance Corporation of India and the various scheduled banks, Government agencies, and all others in concert with whom we act, and I trust that in the future too we shall continue to receive their unstinted encouragement. While mentioning acknowledgements, it would be unpardonably remiss not to mention the outstanding contribution of my predecessor Shri S.K. Misra in building up this institution, and in inspiring it to provide the services for which it was established with dedication and zeal, over the years.

17. Of course, no institution may function, or may achieve any success, without the involvement of its staff and officers. Whatever may be the calibre of the Board of Directors, and whatever may their aspirations be, it is ultimately the personnel of the organisation who convert ideals into actions, targets into achievements. I must therefore, acknowledge the loyalty and industry of the staff and officers of the Corporation, headed by its Managing Director, Shri T K Banerji, who have striven without reserve to make the Corporation one of the leading institutions of its kind.

18. I am thankful to you gentlemen for the goodwill that you have always extended to your Corporation and for the trouble taken by you to be present here today. The balance sheet and the profit and loss account of the Corporation, alongwith the Directors' Report is now open for your consideration.

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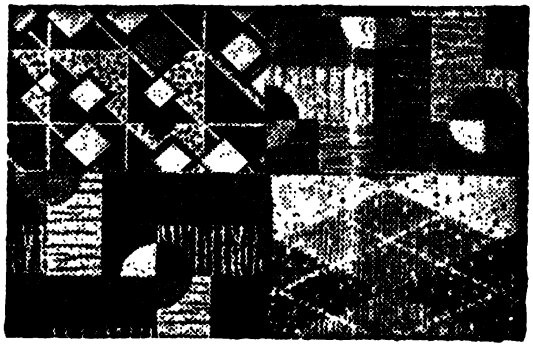

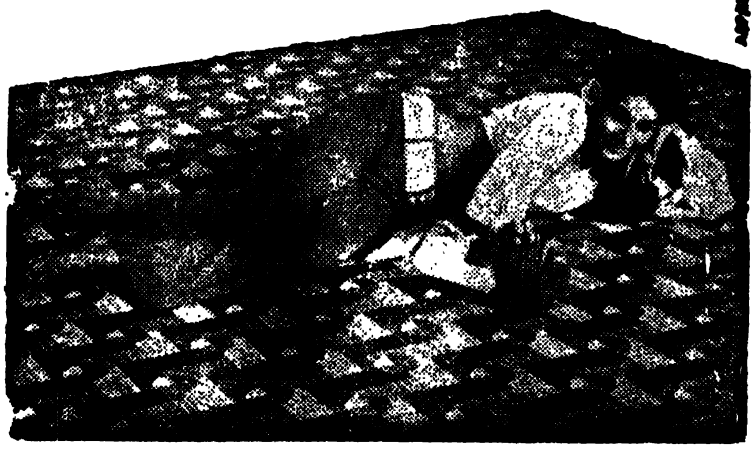

RECORDS AND STATISTICS

Export and production perspective: 1980-81

THE FEDERATION of Indian Chambers of Commerce and Industry (FICCI) has prepared a blueprint for exports with targets indicated for 1980-81. The FICCI is of the view that exports of this country should be increased but not beyond 25 per cent of domestic production. Undoubtedly, there are such industries as tea, coffee and jute manufactures which export about half of the total domestic production but if overall exports are limited to 25 per cent of industrial production, the economy will be in a better position to absorb external fluctuations.

Given below is the chapter entitled "Production and Investment for Exports" from this study along with some statistical data which have a bearing on the recommendations made by the FICCI:

Expor effort can be sustained only if it is adequately supported by requisite domestic production. This aspect has not received necessary attention and as such either exports have not grown to their full potential or have been at the cost of domestic consumption.

It can be appreciated that in respect of luxury goods, for example, diversion of production to export markets, even by reducing domestic consumption would not be undesirable. But such diversion becomes difficult when domestic demand is strong and consequently fiscal and administrative measures have to be pressed into operation. For this reason, an expanded export effort has to be backed by appropriate increases in domestic output.

Agricultural Exports

It has been observed that, on the whole, about six per cent of agricultural output and nearly egiht per cent of industrial production is exported. The percentages, however, vary from product to product. Tea, coffee, jute, etc. are primarily export industries. Nearly a half of the production of these industries finds markets abroad. On the other hand, only about seven per cent of the production of engineering goods, two per cent of handloom cotton textiles, or 0.5 per cent of coal is exported.

For the main export commodities the ratio of exports to production is shown in Table I.

In a large number of industries the proportion of exports to production is small. Where it is high, as for example, 63.7 per cent in the case of iron ore, it reflects our lack of capacity to expand domestic production of manufactured product. Also there are industries suchas tea and jute which have a large export base.

High Surpluses

In recent months a number of industries have been overtaken by recession and capacity utilisation is not high enough, even for domestic market. Consequently, export surpluses have been considerable. Whether these have been actually used to promote exports is, however, a different matter. But obviously the situation cannot be expected to continue for long. Once the economy gets into swing, surpluses will disappear; therefore, unless production is expanded, export will become difficult.

There are two main considerations involved in planning future production, keeping the export needs in view:

— Export surplus should not be at the cost of domestic consumption or use.

— The percentage of production exported should not be very high, since export market fluctuates and as such creates disturbances in domestic industrial conditions.

Export has to be a built-in factor in production planning. Production should be enough to meet

TABLE I

Exports and Production in 1974-75

	Per cent of exports to production (1974-75)
Tea	45.6
Coffee	57.3
Tobacco (Unmanufactured)	17.0
Jute Manufactures	47.3
Sugar	14.9
Marine Products	2.0
Non-essential Oils	25.0
Coal & Coke	0.5
Iron Ore	63.7
Cement	2.0
Art Silk Fabrics	9.0
Cotton Textiles (Mill-made)	10.0
Cotton Textiles (Handloom & Powerloom)	2.0
Chemicals and Allied Products	20.6
Engineering Goods	6.9
Rubber Manufactures	5.3
Leather and Leather Products	4.2
Cashew Kernels	19.0
Spices	5.4
Rice	0.1
Coir and Coir Products	13.5

Notes: (i) Domestic supply of cashew kernels includes production and imports.

(ii) Spices cover only major spices.

domestic demand as well as export, the latter being determined on the basis of external market potentialities. In the short term a spill-over from one market to the other is inevitable. But even then production conditions must be flexible enough to correct such maladjustments quickly.

Seperate Identities

The separate market identities — domestic and foreign — do not imply dichotomy of production. For this reason, the production system itself must be commercially efficient. Cost and quality have to be competitive, judged by international standards. Export which needs to be subsidised because the production system is uneconomic does not have a good future. It creates distortion and inflicts a wholly unnecessary burden on society.

It also needs to be recognised that export market is not steady. Innovations, changes in tastes and fashions, political disturbances, international economic developments, currency variations, freight rates changes, crop failures, strikes etc, expose the export market to great fluctuations. Therefore any industry which depends overwhelmingly on exports is likely to be susceptible to occasional shocks. These can cause great harm to the economy, particularly if the export industry is a major one.

As a general guideline, export should not exceed 25 per cent of domestic production. Of course this guideline cannot be rigidly applied in all cases. As mentioned earlier, industries such as tea, coffee, jute etc. already export about a half of the total domestic output. But, by and large, if exports are limited to 25 per cent of industrial production, the economy will be in a better position to absorb external fluctuations.

The limitation of exports to 25 per cent of production can be brought about by:

— Greater diversification of exports.

— Larger production for domestic market if it can be sustained by adequate demand.

Diversification of exports will be achieved, in considerable measure, in the next five years. The accent on traditional exports like tea, jute, textiles, etc, in 1980-81 will be relatively less, compared to engineering goods and chemicals. But the process of diversification will take a much longer time to be completed.

Planning for Future

In planning production in the next five years, it is, therefore, necessary to produce comparatively more for the domestic market in areas in which exports are likely to expand relatively faster, subject to the nature of the commodity and availability or demand.

The export possibilities will demand that necessary production is undertaken so as to generate required export surpluses by 1980-81. Considering the gestation period of some of the complex industries, action will have to be initiated within a very short time.

Keeping in view the broad approaches mentioned earlier, and the additional domestic consumption consistent with the increase in income, the extra production that will have to be planned in respect of the major export items would be as given in Table II.

The increase in the exports of agricultural and agro-based products as also their production would be at a smaller rate than that of manufactures. But considering the additional export effort, the proportion of output exported will rise in respect of both these sectors. For example:

— the proportion of agricultural and agro-based exports to their production would step up from 6.31 per cent in 1974-75 to 8.17 per cent in 1980-81.

— the ratio of exports of manufacture to production

TABLE II

Increase in Production and Exports in 1980-81 over 1974-75

	Unit	Increase in exports (1980-81 over 1974-75)	Increase in production (1980-81 over 1974-75)
Tea	Th Tonnes	47	101
Coffee	"	9	17
Tobacco (Unmanufactured)	"	42	78
Jute Manufactures	"	35	161
Sugar	M Tonnes	1	2
Marine Products	Lakh Tonnes	1	5
Non-essential Oils	M Tonnes	0.02	0.04
Coal and Coke	M Tonnes	1	76
Iron Ore	"	23	31
Cement	"	2	15
Art Silk Fabrics	M Metres	66	263
Cotton Textiles (Mill-made)	"	57	657
Cotton Textiles (Handloom and Powerloom)	"	82	701
Chemicals and Allied Products	Rs Cr	155	431
Engineering Goods	"	752	4424
Rubber Manufactures	"	37	182
Leather & Leather Products	"	163	559
Cashew Kernels	Th Tonnes	20	20
Spices	M Kg	12	87
Rice	Th Tonnes	39	6070
Coir and Coir Products	"	3	16

Notes: Figures are rounded to the nearest integer.

would go up from 8 per cent in 1974-75 to 11.2 per cent in 198-81.

Agricultural production traditionally shown low growth rates. It is not easily amendable to effort and as such increases in production cannot be planned on a large scale. This is true of a variety of products such as sugar, tea, oilcakes, cashew kernels, spices etc. But the increases in exports also are not likely to be such as to involve substantial diversion from domestic consumption.

Industrial production, on the other hand, is wholly responsive to investment. Since in industries such as engineering, chemicals etc, possibilities for large exports exist, expansion of output has to be undertaken as expeditiously as possible. For example, in engineering industry, output will have to be stepped up from about Rs 5000 crores to over Rs 9518 crores, in chemicals from Rs 280 crores to nearly Rs 820 crores, and so on. Unless these increases in output are planned sufficiently in advance, we shall not be able to undertake the possible exports in 1980-81.

High Potential

There are certain products like fruits, fish and meat which not only call for an increase in production but also accompanying services like refrigeration, scientific handling etc. These items have great potentiality and need to be given urgent attention.

It would be relevant to indicate, though broadly, the magnitude of investment that will have to be undertaken to generate production for export. This exercise can be done at two levels viz, aggregate and sectoral. The first would imply anticipating plan content itself which is beyond the scope of the study. What can be more usefully accomplished is the measure how much additional investment will have to be made to generate adequate surplus for exports of the magnitude outlined.

Overall Strategy

Even such an estimate will have to be somewhat limited in scope because there are a number of products, mainly agricultural, the output of which will depend on the overall development strategy rather than investment in the production of that specific commodity. Since such investment is not directly related to exports, it has been excluded from our estimate: so also investment in services like refrigeration, shipping etc.

On this basis, the investment that will be called for in various types of industries in public and private sectors, for producing the additional output for export would be Rs 1817 crores. The composition of this investment is given in Table III.

This investment is in addition to that required to generate production for domestic use. What is more, it will have to be undertaken as early as possible, preferably in the next three years, so that the requisite goods are available in 1980-81 without reducing domestic availabilities. In other words, investment will have to be stepped up by Rs 600 crores per year, over and above, what is required to sustain growth for domestic needs.

Level of Investment

The level of investment for additional exports will need to be matched by additional savings. Unless the country is in a position to make this extra savings effort it will not be possible to support an export programme of the magnitude envisaged.

Export growth is not a new feature. As mentioned earlier, in the past 5 years, a substantial increase in exports has taken place. The additional export production and the corresponding investment will have entailed additional savings. It is found that, on an average, an export of Re 1 will require an investment of Re 0.75 to generate the necessary production. On the basis of export growth in 1970-75 it can be estimated that Rs 160 crores of additional savings per year or 0.38 per cent of the GNP has been used for export purposes.

In the next 5 years, GNP can be expected to grow at an average annual rate of 5.5 per cent. If the export of the order envisaged is maintained, an additional Rs 600 crores will have to be earmarked to sustian production for exports.

TABLE III

India's Share in World Imports of India's Major Export Products in 1972

Commodity	% share
Tea	28.35
Leather & Leather Manufactures	12.81
Cotton Textiles	5.32
Tobacco Unmu-factured	4.23
Iron Ore	4.30
Floor Coverings	2.50
Gems & Jewellery	1.93
Sugar & Honey	1.84
9. Fish & Fish Preparations	1.61
Railway Vehicles	1.41
Bicylees	1.46
Steel Structurals	1.34
Fruits & Vegetables	1.35
Coffee	0.96
Clothing	0.67
Wire products	0.73
Tools	0.61
Electrics, Wires, Cables, Transformers	0.76
Iron & Steel Tubes & Pipes	0.63

Source: U.N. Yearbook of International Trade Statistics, 1974.

TABLE IV

Extra Investment Required for the Increment in Exports in 1980-81

(Rs crores)

Engineering Goods	671
Chemicals	190
Iron Ore	460
Silk & Art Silk	26
Cement	170
Others	300
Total	1817

This would mean that in the next 5 years about 0.81 per cent of GNP will have to be saved to finance investment in export production industries. It appears that this increase in savings formation is not such as to beyond the nation's capacity. One would be certain that this goal would be achieved if fiscal policies are more actively geared to promote larger savings.

Export-linked Imports

Export production involves not only creation of additional production capacity but also availability of necessary inputs. For lack of data and time, this secondary element in production planning has not been considered. But it is quite likely that full availability of domestic inputs of the right specifications and in right quantities will not be possible. Fort his reason, import of some of the inputs will become necessary. In estimating import needs this aspect was kept in view. Such export-linked imports have to be liberally allowed to keep the production system going and support export promotion.

There is a time lag not only between investment and production but also between production and exports. This lag can be quite significant particularly in respect of new export commodities and new export markets. In the case of engineering goods, for example, which will have to be exported increasingly to developing countries the time lag will be quite pronounced. Hence export promotion measures will [illegible] now to ensure that production which will come by 1980-81 will find ready markets abroad.

Thus the future export potentialities have to be carefully built up through investment and production effort in appropriate areas. at the same time, since production has to be efficient, measures will have to be initiated to put our production system on the same competitive basis as in other countries.

TABLE V

India's Exports as Percentage of Gross National Poduct 1966-67 to 1974-75

(Value in Rs crores)

Year	GNP	Exports	% of exports to GNP
1966-67	25198	1152.88	4.6
1967-68	29714	1192.82	4.0
1968-69	30560	1354.18	4.4
1969-70	33883	1408.70	4.2
1970-71	36730	1524.38	4.2
1971-72	38899	1603.15	4.1
1972-73	42136	1964.39	4.7
1973-74	52193	2518.34	4.8
1974-75*	63375	3298.62	5.2
1975-76**	65000	3863.00	6.0

Note: *Quick Estimates (CSO) **Estimated

TABLE VI

India in World Exports

Year	World Exports		India's Exports		India's share in world exports (in %)
	$ Million	%annual change	$ Million	$ %annual change	
1960	112,300	–	1,331	—	1.19
1961	117,400	4.54	1,387	4.21	1.18
1962	123,600	5.28	1,403	1.15	1.14
1963	136,000	10.03	1,626	15.89	1.20
1964	152,600	12.12	1,705	4.86	1.12
1965	165,400	8.39	1,687	1.06	1.02
1966	181,200	9.55	1,577	6.52	0.87
1967	191,100	5.46	1,612	2.22	0.84
1968	213,400	11.67	1,760	9.81	0.82
1969	245,800	14.71	1,835	4.26	0.75
1970	280,700	14.67	2,026	10.41	0.72
1971	316,600	12.79	2,034	0.39	0.64
1972	376.600	18.95	2,452	20.55	0.65
1973	524,600	39.30	2,917	18.96	0.56
1974	777,700	48.25	3,925	34.56	0.50
1975*	793,254	2.00	4,180	6.50	0.53

Note: *Estimated exports on the basis of two quarters of 1975.

Source: Date up to 1974 from International Financial Statistics, IMF (various issues)

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